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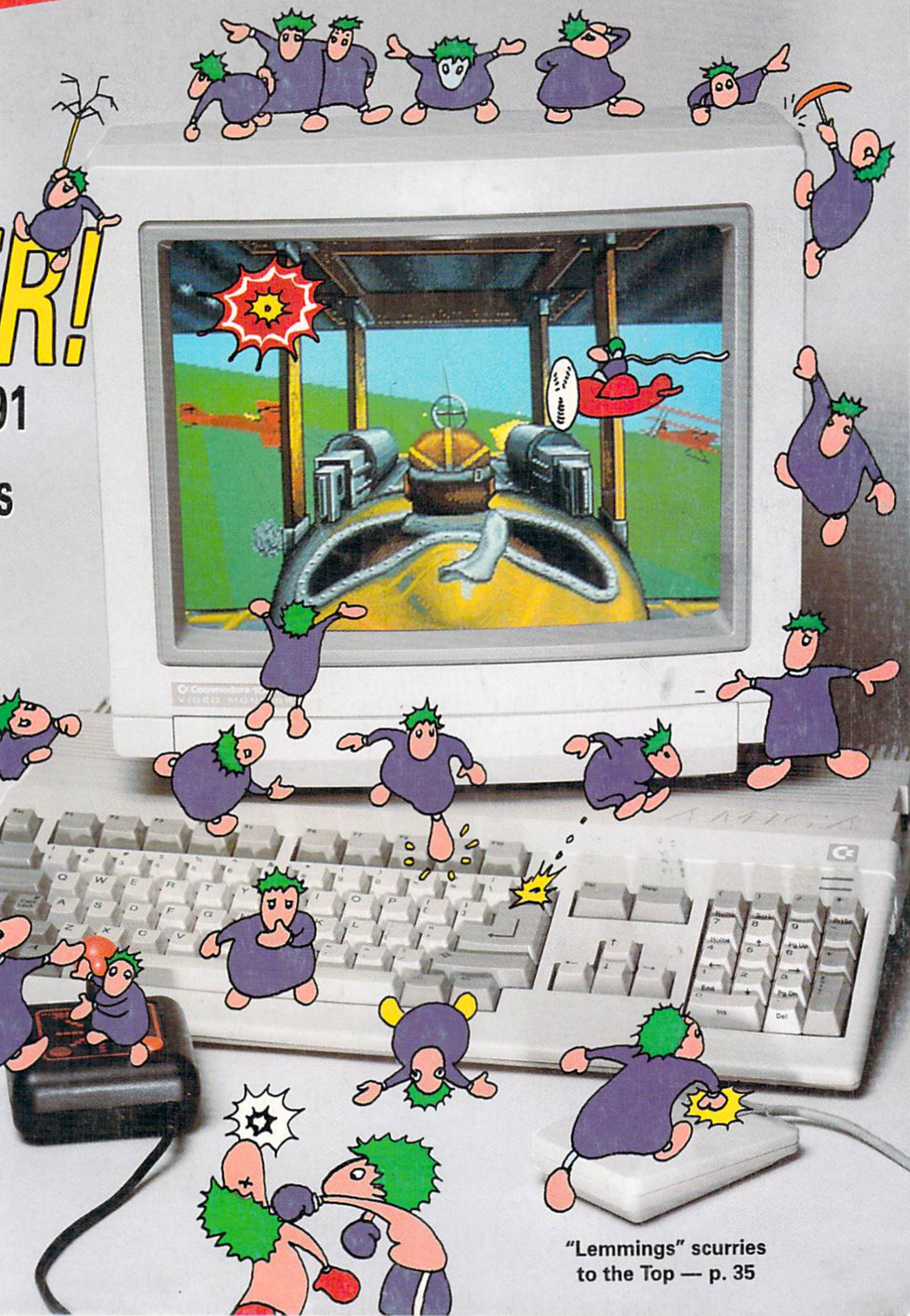
ARexx Interfaces

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REVIEWS:

- Firecracker 24
- Showmaker
- SupraModem 9600
- HAM-E...And More!



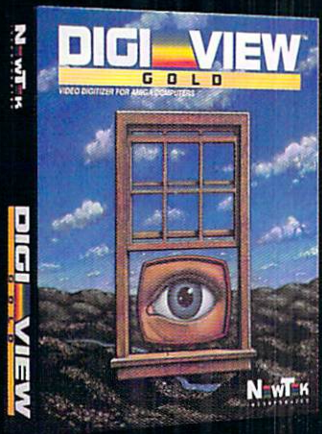
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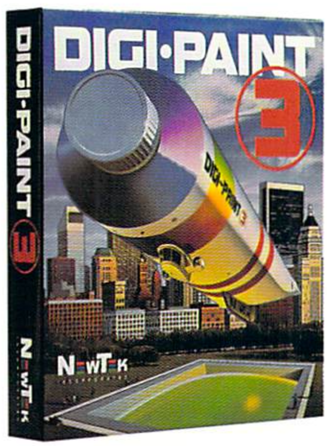
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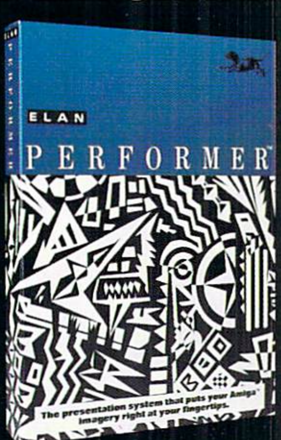
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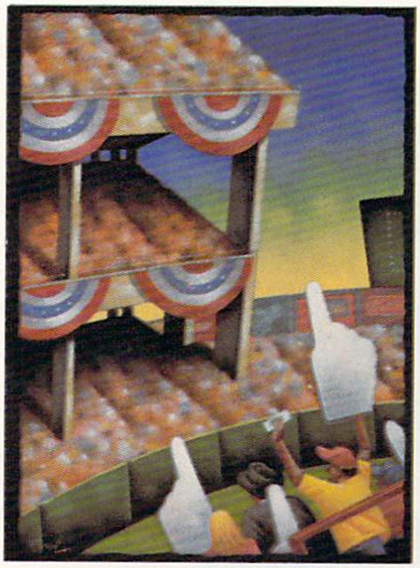
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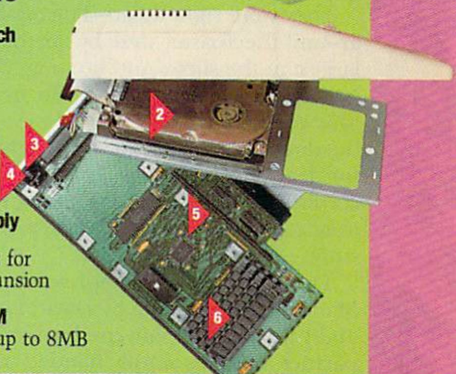
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CHIEF CONCERNS

What's Up, Mac?

CALL ME A HYPOCRITE if you like, but I recently attended MacWorld Expo in Boston, and apart from losing a great Alpine car stereo, a window, and an entire glove box to South Boston thieves, I had a great time.

I actually had a few legitimate reasons for attending. For one thing, I wanted to see Amiga vendors Gold Disk, Dr. T's, and NewTek in Mac land. And I got out of the office for a whole day.

But mainly I went there to see where Mac-based video and multimedia products stood in comparison to the Amiga. On the multimedia front, the software I saw was superb. Fortunately, with Apple's custom chipless hardware, this stuff is slower than Roseanne Barr running a marathon.

The video front was even more reassuring. Mac vendors are almost entirely focused on presenting video on the computer, not on using the computer to enhance real broadcast-quality video.

On my way down, I thought of an experiment. I had heard the folks from NewTek brag before about being the hit of MacWorld in San Francisco, and decided to test 'em in Boston. So I purposely walked the entire show floor before heading over to the NewTek booth.

They were right again. The crowds around the Toaster were by far the largest at the show. And no longer was NewTek in hostile territory. Far from it. Mac vendors like Macromind were lined up around the corner begging for deals to support the Toaster. According to my sources, even underweight Apple chief John Sculley stopped by for a full demo.

The biggest Toaster suprise was a Mac interface, written by David Levine, Todd Rundgren's software business partner, that was simply handed to NewTek.

I've heard a lot of rabid would-be Yeltsins complain that NewTek's executives are traitors to the very Amiga community that gave it power. It's true in some sense. NewTek is not hopping up and down telling Mac users to buy Amigas. They are telling them to buy a Toaster and run it from their Mac.

But more and more of the attendees were excited by the fact that a Toaster system includes an Amiga, and that the Amiga can do other great things that are out of the range of the Mac. One of the more common questions I heard was "You mean I don't even need a Mac? Wow. Great!"

If NewTek employees are traitors, then they were in good company. Dr. T's was also drawing great crowds for their Mac-based music software, and Gold Disk was there showing off its hot new Animation Works for the Mac. If this diversification is successful, then both firms have more resources to pump into Amiga products, we hope.

Not all Amiga vendors were exhibiting. Some were there on more mysterious missions. Somewhere between Gold Disk and NewTek, I ran into Gerard Bucas, president of GVP, and his trusty VP Gregg Garnick. They were a mite cagy about their purpose, and for the record Bucas would only say "No comment."

I wouldn't worry too much about a GVP defection. We've been playing with their new board, Impact Vision 24 (see "Video Suite," p. 68, for a preview), and are hearing about some wild new Amiga things in development. These guys are on fire in the Amiga market, and will ignite a few more boosters in the coming year.

I only wish that Commodore had been there, too.

WAYNE'S WORLD

Did you know there is a movie currently being filmed that is based on the Saturday Night Live skit, *Wayne's World*, and stars Dana Carvey and Mike Myers? Maybe you did, but even so you are probably asking, "What does this have to do with the Amiga, sock breath?" A couple of things, actually.

For one, Dana Carvey's heavy metal "Oh Wow" stoner character Garth takes on a new dimension. Dana will add the techie personality of his brother Brad, who helped build the Video Toaster. It's kind of a natural, since *Wayne's World* is a cable-access show, and somebody like Garth had to handle the technical side of setting the whole thing up.

Besides, Dana has been doing this character in his stand-up act for eons, with bits sort of like this, but funnier:

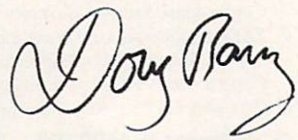
"What did you do today, son?" their dad would ask.

"Oh, I shot some baskets with Jimmy, and ate some food." Dana would say.

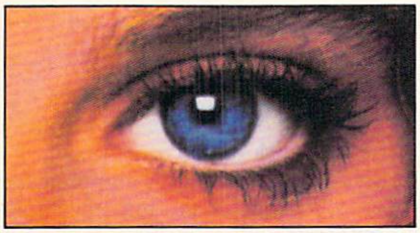
"And Brad, what did you do today?"

"Oh, not much. I built that space ship I was talking about, and took it out for a little spin, and I built a turbocharger for your engine."

The filming is in progress as we speak, and there is a distinct possibility that the Toaster will also play a major role. Oh, wow! ■



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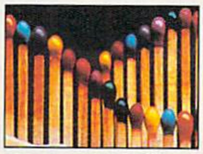
▶ **Simultaneous Component Video (RGB) Out, Composite Video Out and S-VHS Video Out.** Now, anything you can see on your Amiga monitor can be recorded on video tape, including animations, ray-traced 24-bit images and more!

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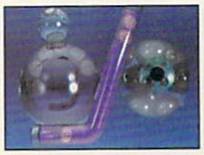
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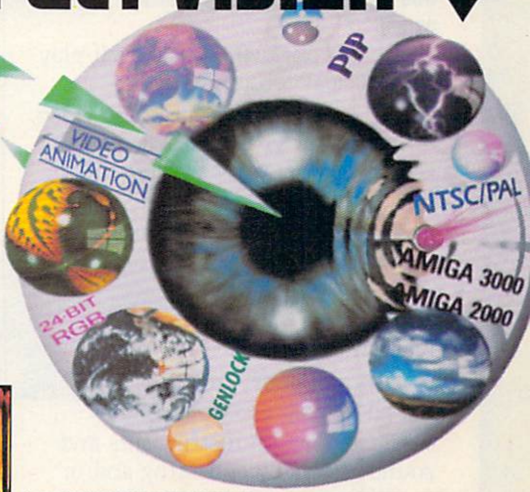




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✓ AmigaDOS 2.0 compatible; written in assembly language.

✓ Multi-tasking operation.

✓ 68020 and 68030 compatible.

✓ Comprehensive tutorial manual helps even beginners get started right away.

✓ Intuition-based graphic interface makes operation easy.

✓ MIDI-in capability.

✓ Direct interface between sequencer and editor.

✓ Hold 32 sound samples in memory at once – all shown on screen so they are easy to manipulate.

✓ Effects and processing capabilities include echo, mix, filter, re-sample, sound data inversion, playing sounds backwards, loops, fade-in/fade-out and more.

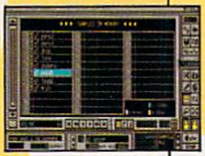
✓ Manipulate sound samples in real time, as you listen.

✓ Create sampled instruments with 1, 3 and 8 octaves.

✓ HIFI recording for highest quality playback.

✓ Controls for faster/slower playback and filtering high frequencies during playback.

✓ Load and save samples, songs and instruments in multiple formats.

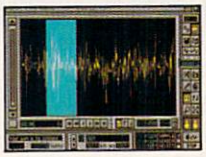


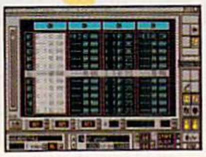


✓ Multiple effects for each note.

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✓ Real-time oscilloscope and spectrum analysis.

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OVERSCAN

News, New Products and Networks

Commodore Tells All: Top Dogs Disclose Plans For Amiga

In a series of interviews during August, James Dionne, President and General Manager of Commodore's U.S. division, and David Archambault, Director of Business Markets, disclosed a number of the company's plans concerning the Amiga.

Dionne was just the man to clarify Commodore's position on the release of AmigaDOS 2.0. "We are planning this year to offer the 2.0 upgrade to A500, A2000, and A3000 owners," he explained. "At the World of Amiga show [held in New York City in April], the announcement was that 2.0 would be released in mid-July. However, because of some technical delays, that release has been pushed back to October first." He then added, "As for when it will be offered on production models, a firm date has not yet been decided."

Those wondering about CDTV can rest assured that, according to Dionne, its rollout is progressing as planned, and full national distribution is scheduled for this Christmas. "We also expect to be offering a CDTV professional package for dealers and users who want to use their CDTV as a full-blown, one-meg Amiga computer system."

Asked about the Amiga in professional and vertical markets, Dionne replied that "On the professional front, CBM will once again be exhibiting at Comdex this October, participating in the multimedia center in Bally's, where we will be showing a full line of CDTV and Amiga multimedia solutions."

Archambault added that Commodore will be demonstrating a theme entitled The Steps To Multimedia. "Eight to ten workstations will be on display," he said, "With some stations representing different aspects of multimedia creation—music, video, animation, and authoring—and others showing the cost-effective delivery stations the Amiga and its technology allow: CDTV, A500's, as well as stand-alone kiosks." Archambault noted that at least some of the demonstrations will center around specific applications, among them "training, presentations, and education."

The October Comdex show will find the Amiga not only in Commodore's booth, but also in some of the show's professional seminars. In fact, Archambault plans to chair a panel entitled The Multimedia Customer—New Support Requirements. In addition to Archambault, panel members will include representatives from Federal Express, Apple, and IBM. Another panel Archambault will take part in is called Multimedia Standards.

Power, Ads, and Towers

Archambault announced the extension of the A500 Power Up program through Christmas, and said that it will continue to be available to students and teachers. The program allows owners of Commodore eight-bit computers to upgrade to the A500 for a discount. Give

Continued on p. 16.

Amiga In, Commodore Out at SIGGRAPH '91

LAS VEGAS, NEVADA—Where Advanced Technologies Inspire Tomorrow's Realities. That was the theme of the 1991 SIGGRAPH show. Held by the Special Interest GRAPHics arm of the Association for Computing Machinery, the event took place July 29-August 3. Traditionally one of the largest computer-graphics conferences in the country, it attracted over 26,000 attendees this year.

As always, the crown jewel of the conference was the Electronic Theater, a collection of still and animated graphic works selected from an unprecedented 440 entries. The show was stunning. As attendees took their seats, each found a stick with duct-like tape on the end, red on one side and green on the other. This device was part of an exhibit by Loren Carpenter of Pixar.

The exhibit, called Audience Participation, gave each member of the audience control over one pixel in the image displayed on the giant screen. As audience members held the tape up to the screen and flipped it back and forth, they could locate their spot on the screen. Behind the scenes, software filtered a retroreflective red-and-green matrix from overhead video images of the audience. This matrix was processed in real time by computer and projected onto the screen. Each viewer could interact with the audience as a whole or be content to locate his space in this universe of 7000 viewers.

The rest of the Electronic Theatre show sustained the audience's excitement for over two hours. Nearly every entry presented eye-popping graphics and new effects.

Continued on p. 16.



OVERHEARD

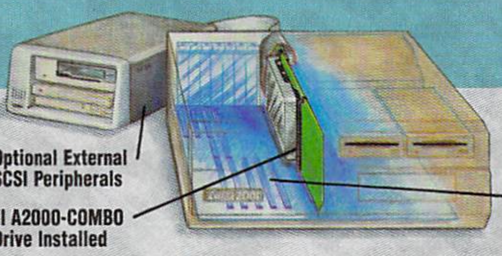
Have you ever wished for a piece of software that does not exist? Deltaware is now seeking entries for its software-writing contest. The 20 most innovative ideas will win their originators Deltaware's A-Sound Elite sound-sample editor. Describe your idea in 75 words or less and send it to: Deltaware Products, 3148 Kingston Rd., Suite 202, Box 395, Toronto, Ont., Canada M1M 1P4. (Don't forget to include your address and phone number!) Entries must be received by November 20 to qualify.

To locate the vendors of products mentioned, see the "Manufacturers'/Distributors' Addresses" list on p. 118.

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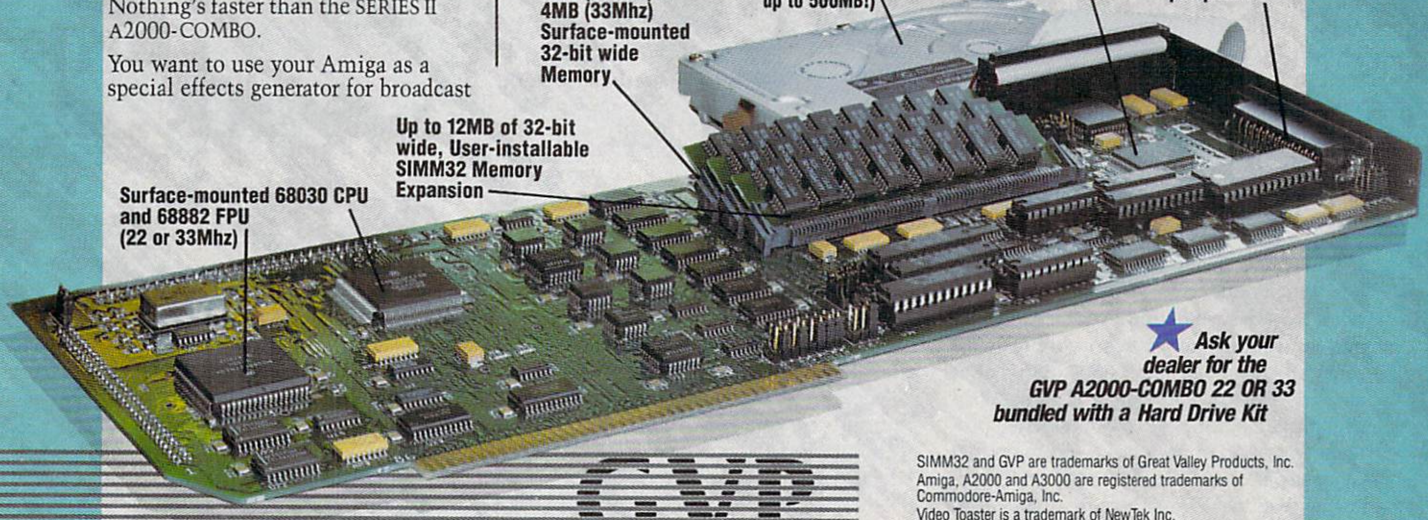
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T. (33) 56-363-441 • F. (33) 56-362-846

SDL – United Kingdom
Unit 10, Ruxley Corner Ind Est.
Edgington Way, Sidcup • Kent DA 14555
T. (44) 81-300-3399 • F. (44) 81-300-6765

Power Peripherals – Australia
1st Floor, 257 Hawthorne Rd.
Caulfield North 3161 • Victoria
T. (61) 3-532-8553 • F. (61) 3-532-8556

Dealers Circle 27 on Reader Service card.

DTM – West Germany
Dreiherrenstein 6A • 6200 Wiesbaden-Auringen
T. (49) 6127-4065 • F. (49) 6127-66276

Datacom APS – Denmark
Kirkerfenget 23 • Hatting • 8900 Horsens
T. (45) 75-65-37-88 • F. (45) 65-37-16

Merlin – Austria
Dorfstrasse 5 • A06074 Rinn • Innsbruck
T. (43) 522-388-96 • F. (43) 522-388-97

Pixel Soft – Spain
C) Gral, Franco • 7 Entlo F-G • 3400 Palencia
T. (34) 88-751180 • F. (34) 88-751191

Broadline OY – Finland
Vanha Porvoontie 295 • 01260 Vantaa
T. (358) 087-479-00 • F. (358) 087-449-44

Non-Stop SPA – Italy
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Microtron Computerprodukte – Switzerland
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Consumers Circle 28 on Reader Service card.

TAKE CONTROL

Do you need help monitoring or operating on/off inputs and outputs? Would 24 input/output control ports—with eight lines each—help? Now you can plug in, turn on, and turn off with ***Advanced Control Systems*' RCU-200 Industrial I/O Control Unit** ($995; $695 for the board-only version). The plastic-encased unit measures 13.5×10×7 inches, comes with all the power supplies necessary, and connects to the Amiga via the serial port.

While the RCU-200 is designed for control from a remote computer, you can custom program it to be an independent controller. You can also set any ratio of inputs and outputs. The inputs are filtered and diode-protected. The outputs have 50V/.6Amp drivers, which are diode-protected to switch inductive loads.

If controlling motors keeps you running, start up Advanced Control Systems' **MCB-4 Motor Control Board** ($695). The MCB-4 can operate four stepping motors (four-phase units, at two amps per phase) simultaneously. Like the RCU-200, it can work independently or under the supervision of your computer via the RS-232 serial port.

Rated up to 10,000 steps per second and 16.7 million steps per move, the MCB-4 lets you program acceleration and deceleration and has optoisolated home and four limit inputs. The power section is optoisolated from the control section for noise reduction, and there is a nonvolatile memory for motion control variables, as well as an indication for end of motion. (RS# 118.) *—DH*

SHORT STACKS AND TALL

Looking to build applications? ***Impulse*** has your **Foundation: The Personal Software Authoring System** ($250). The package is designed to let even nonprogrammers create applications (including standalone marketable stackware and home/office organizers), automated and interactive presentations, and front-end screens to control other devices.

Foundation's "True HyperText" environment lets the user of your software navigate to text, pictures, video, and external programs simply by clicking on a word or phrase. You can create programs by adapting the sample stacks and objects, or by using Foundation's FAST-Talk scripting language. The software comes with a built-in debugger and compiler, as well as two freely distributable browsers that allow any Amiga user to share and examine stacks. (RS# 116.) *—DH*

MOVE OVER, MOVIES

Disney Software invites you to join the world of cartoons by playing the role of Dick Tracy, Roger Rabbit, or The Rocketeer in one of the company's latest games. All of these support Disney's Sound Source option, which gives you music and sound effects and allows you to hear the characters' conversations rather than reading them on screen. The **Sound Source** is $39.95 by itself, but in combination with one of these three games, it is $69.95.

In **Dick Tracy** ($49.95), it is your job to solve crime in the city and ultimately to bring in Big Boy Caprice. To succeed, you must think like a detective: look for clues, interrogate suspects, be tough.

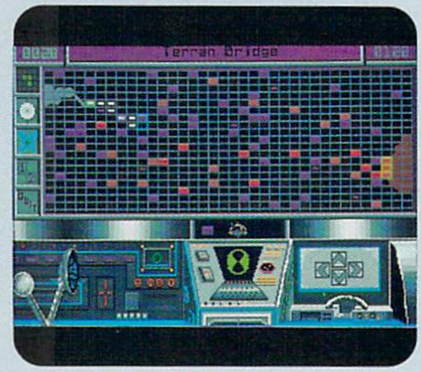
Hare Raising Havoc ($49.95) challenges you, as Roger Rabbit, to think like a cartoon character: You must find Baby Herman before Mommy gets home—or return to the cosmetics testing lab. Remember, anything can happen in a cartoon!

In your final choice of roles, your girl friend has been kidnapped. G-men are trailing you, and Nazis abound. Can you save her? Nothing is too much for **The Rocketeer** ($49.95)! The game features videotaped actors, sets, and props from the movie.

If you'd rather direct or perform stunts than act, try Stunt Island: The Flying and Filming Simulation ($59.95). This game lets you set the stage for a thrilling flight film and puts you in charge of camera placement, choreography, directing, and editing. You can also play stunt pilot in your choice of planes, including the P-51 Mustang and the Pitts Special. Stunt Island also supports Disney's Sound Source. (RS# 101.) *—DH*

CONSTRUCTION WORK AHEAD

"When I grow up I want to be...a Cosmostructor!" If that's your wish, you need only get a copy of ***Empire Graphics'*** new space-strategy game, **Cosmostruction** ($29.95). Your job: to construct a cosmic-energy duct between space colonies and nearby planetoids.



To foil your opponent—the computer or a friend—you can place mine traps and use warp gates for positional tactics. Watch your step, though; your opponent has the same capabilities. Cosmostruction's randomly drawn game field makes each play unique. (RS# 106.) *—BG*

STRESS-FREE GAMING

Experience ***Data East***'s **Continuum** ($49.95). With both Emotion and Action modes, the game hopes to appeal to both competitive and noncompetitive spirits.

In the first mode, you board one of the game's six ships and begin your travels through the more than 250 rooms designed to evoke different sensations through sound, shape, and color combinations. The laws of physics change from room to room, and you can view each from many angles. You also can choose between "mood realms" such as Dream, Awaken, Stimulate, or Meditate.

Turn on Action mode, and the game becomes a competitive arcade-style environment, adding such things as a clock and a scoreboard. (RS# 104.) *—DH*

PLAY THEM AGAIN, SAM

Raw (Role-playing, Adventure, and War games) ***Entertainment*** is entering the American market, initially with "games from small US companies that did not get the recognition they deserve." Among these are **Blitzkrieg at the Ardennes** and **White Death** (both from Command Simulations). In addition, Raw Entertainment has ported to the Amiga two other PC games: **Action Stations!**, from Conflict Analytics, and **Worlds at War**, from Lyric Software. Each of the games is $49.95.

And you can expect more! In the wings from Raw are **Fleet Commander**, a WWII naval simulation follow-up to Action Stations!, and **Space Inc.**, a "science faction" futuristic space-travel title. (RS# 108.) *—BG*

Timely

I.DEN announces the release of two new time-base correctors with genlocking capabilities: the **TBCard** and **TBCard Plus.** These plug-into-your-A2000 cards can serve as input sources for such devices as NewTek's Video Toaster. A bandwidth of 5.5 MHz (about 450 lines of resolution) promises true time-base correction of such high-resolution VCR signals as Super VHS, Hi-8, and U-matic.

The TBCard, designed for mid- to low-end applications, accepts Y/C and composite signals. Potentiometers on the front of the board allow you to control proc-amps and system timing.

The TBCard Plus, which is better suited to mid- and high-end applications, has a wider range of inputs: composite Y/C, component (R-y, B-y, Y), RGB/Sync, and DOC. Its outputs include Y/C, composite, and component. An exterior box gives access to proc-amp control and system timing. An optional main frame with a power supply accommodates up to ten Plus cards to enable multichannel time-base correction. (RS# 117.) *—DH*

Graphics Compactor

Envy the IBM's and Mac's ability to compress images? Envy no more. ***ASDG***'s new **JPEG** image-compression software promises to do the job. Offered as a part of ASDG's Art Department Professional, JPEG lets you load and save JPEG files with a choice as to how much to compress your images (up to 80 to 1 or better). Your files will be interchangeable with those created on IBM, Apple, or other computers that follow JFIF standards. (RS# 115.) *—DH*

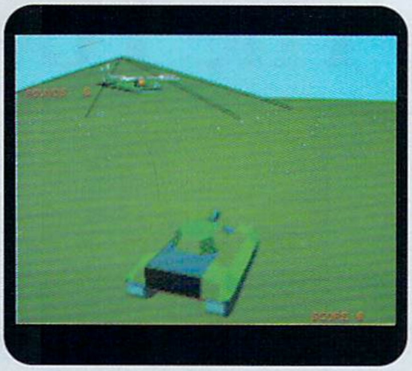
Flow and the Pro

If you have a burning desire to know the psychology of optimal organizing, get into the flow of *New Horizons*' updated idea organizer. **Flow 3.0** ($110) allows you to enter ideas and thoughts quickly, so that you can go back later and build your document in a logically constructed manner. Among Flow's new features are outline autonumbering, ARexx support, macro creation, headers and footers, and a spelling checker. You can also save the configurations that you have set up.

The new 3.2 version of New Horizons' **ProWrite** word processor ($175) integrates PostScript-capable output. It also allows you to exchange text files with Pro Page (Gold Disk).

If you currently own ProWrite or Flow, contact New Horizons for upgrade information. (RS# 119.) *—BG*

A Real Blast



The North and South divide, and suddenly you are in the midst of a world war. In **Battle Command** ($34.95, Ocean of America/***Electronic Arts***), a futuristic action/strategy tank simulation, you have been chosen to complete 16 missions in control of a fighting machine equipped with the most advanced weaponry available. Depicted in 3-D polygon, Battle Command boasts a landscape populated with hills, trees, buildings, electricity pylons, and rivers. (RS# 105.) ***—BG***

That Was Then, This Is How

Tired of the same old scene? Then change it! Jack Nicklaus' Unlimited Golf and Course Design—the second most popular sports simulation in *AmigaWorld*'s '91 countdown—is now more expandable, thanks to **Jack Nicklaus' Course Designers Clip Art: Volume I** ($24.95, ***Accolade***). The package offers you the choice of a seaside vista, parkland, or desert for a land plot, plus nine new scenic backgrounds. You can add final touches with trees, cacti, animals, golf carts, fountains, or any of over 70 other objects! (RS# 103.) ***—DH***

Crank It Up!

Wanna drag? Then maybe you should boot up **Street Rod 2** ($39.95, California Dreams/***Electronic Arts***), where car savvy, driving skill, and race winnings transform you from high-school senior to hot-wheels Houlihan. This sequel to Street Rod, set in 1969, challenges you to build the meanest machine imaginable, choosing from 25 cars and 60 performance parts in the game's full-blown construction set.

With your buggy assembled, you can test your racing expertise on three new courses. Once you've shut down all the local challenges, go up against the King of the Road. (RS# 105.)

—BG

The Prints of Thieves

King's Bounty ($49.95, New World Computing/***Electronic Arts***), the new adventure game from the makers of the Might and Magic game series, casts you as a young noble in the service of King Maximus. Charged with finding the king's stolen Sceptre of Order, you must raise an army before setting out after the thieves.

Each criminal carries a section of the map that tells where the treasure is buried. The bad guys are determined to make your life difficult, but if you finish successfully, you win the king's bounty. (RS# 105.)

—BG

Just Plane Fun

Fighter Duel: Corsair vs. Zero ($49.95, ***Jaeger Software***) mixes flight simulation with combat action. You can take to the skies with a friend, using the game's two-player modem option, and fly along at a rate of 24 frames per second (28 with Fast RAM). Although you need a joystick to get your wings, you can control the panorama via mouse. (RS# 109.)

—BG

USMC: A Retrospective

Halls of Montezuma ($50, ***Strategic Studies Group***), a mouse-driven battle history of the US Marine Corps, puts you in command of up to three divisions in a variety of situations. The scenarios cover battles from the Mexican War to Vietnam, and the game provides historical notes for each battle. The included WarPlan and WarPaint design kits offer up to 150 terrain icons per scenario, all of which you can edit. Learn while you play! (RS# 110.)

—BG



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Top Dogs, from p. 10.
your dealer the model and serial number of your older machine (just the serial number—not the machine itself), and you can get an Amiga 500P (a 1MB machine bundled with productivity software) for $499, or an A500DS (packaged with several games and a word processor) for $399.

Archambault also mentioned that a "new print advertising campaign" is scheduled to run in the fall in conjunction with the A500 Power Up program. As part of the plan, ads should be running in such magazines as RUN, Compute, and so on, by the time you read this.

But Power Up is not all that's fit to print. Another print campaign—this one for video and presentation magazines—is currently getting under way. To capture event videographers, Commodore will emphasize that the Amiga is more than just a single-function piece of hardware: It offers not only video capabilities, but animation, paint, titling, word processing (in other words, general-purpose) functions as well. In targeting the presentations market, ads will hammer home the idea that the Amiga can help you increase retention of information and make a more compelling presentation—all in a cost-effective manner.

Speaking of presentations, Archambault and two colleagues, Jeff Sherb, Vice President of Commodore Applications Technical Service (CATS), and David Haynie, Senior Hardware Designer, appeared at the Boston Computer Society's August meeting to officially introduce the A3000T. The three discussed the marketing, software, and hardware aspects of this new vertically-oriented Amiga 3000. The tower version of the popular 32-bit 68030 Amiga, first announced in April (see Tower of Power, p. 42, May '91) will include a 200MB hard drive and 5MB of RAM for $4998.

—LRW

SIGGRAPH, from p. 10.
For Amiga users, there was the thrill of seeing the exciting German entry entitled "Poems of Ernst Jandl," produced by Eku Wand. The work, created on an Amiga 2000, was also an entry in the SIGGRAPH Education booth.

Addressing the theme of "Tomorrow's Realities" was a room filled with interactive environments. Attendees were invited to interact with the computer environments in a variety of ways—from strapping on goggles and gloves, to riding bikes and surfboards, to watching themselves on screen, tapping drums and bells to create music. The latter display ran on the Vivid Group's Mandala software for the Amiga.

One of the most popular displays was called "Throwing real things into virtual space." These were actually arcade-style games. In one, you bowled a real ball to knock down digital pins. There was also a billiards simulation, in which you used a real cue and ball, and again watched the screen for results.

The exhibit area, which was about two football fields in size, was packed with vendors and was in itself worth the price of admission. Many companies took the opportunity to release new products and upgrades. NewTek, as usual, made an outstanding showing with the Video Toaster and drew crowds of people. NewTek announced that the first software upgrade (about $100) for the Toaster will be released in September.

The only real disappointment of the show was the fact that Commodore pulled out at the last minute. Possibly because Commodore made such an impressive showing in 1990, it was sorely missed this year.

For more information on the nonprofit, volunteer-run SIGGRAPH organization and its annual show, call 415/321-2143.

—Carol J. Sutton



ON-LINE SCAN

By Tim Walsh

Over the past few months, I have considered getting my data line equipped with PhoneMail. Between answering E-mail, watching the varying levels of activity, and reading and writing messages, my modem has never been busier. In the meantime, I have managed to keep tabs on the networks' new Amiga files and would like to share a rundown of interesting items on BIX, CompuServe, GEnie, and Portal.

Of all the new Amiga files on BIX, few are more worthy of mention than one with the unassuming filename HTALL-1A.LZH. Written by Stephen G. Keumurian, the file contains the first issue of Hye-Tech's Amiga Logic newsletter, in both ASCII and ProWrite formats. A small percentage of well-read Amiga enthusiasts won't find much in it they do not already know, but for the information-hungry masses, it makes for quite an interesting read.

CompuServe's AmigaTech area is home to AMENU.LZH, one of the lesser-known freely distributable menu systems for your Workbench. Written by Anthony Thyssen of Australia, Amenu is one of the more stable menu systems I have used under Workbench 1.3 on accelerated machines.

GEnie's most popular Amiga download in many months has been LZ_1.91.LZH (Library 4, file number 12072), better known as the LZ program, a replacement for LHArc. With compression code improvements over LHArc, there's a great deal of potential for this shareware ($15 suggested) program by Jonathan Forbes to become a popular compression standard.

On Portal, there is the freeware file IMPLODER40.LZH as file number 42 under area number 9 (File Utilities). To expedite the retrieval process in Portal's rather inimical environment, just enter GO AMIGA at any Portal prompt, then enter 0 at the next two prompts, followed by 9 and 42, respectively, at the next two.

The executable programs within the 137K of IMPLODER40.LZH constitute Turbo Imploder 4.0., a colorful, easy-to-use European import that no Amiga user should be without. Written by Albert-Jan Brouwer, Peter Struijk, Paul van der Valk, and Erwin Zwart, it compresses files to their smallest possible size. It also decompresses Imploder-condensed files and entertains you with music while it works.

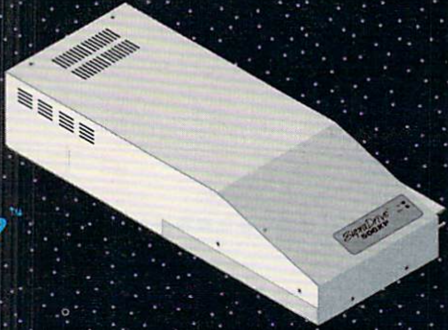
If you are interested in establishing an account on any of the above networks, here are the addresses and telephone numbers you will need:

BIX
One Phoenix Mill Lane
Peterborough, NH 03458
800/227-2983

CompuServe
PO Box 20212
5000 Arlington Center Blvd.
Columbus, OH 43220
614/457-0802
800/848-8199

GEnie
401 North Washington St.
Rockville, MD 20850
800/638-9636

Portal Communications Company
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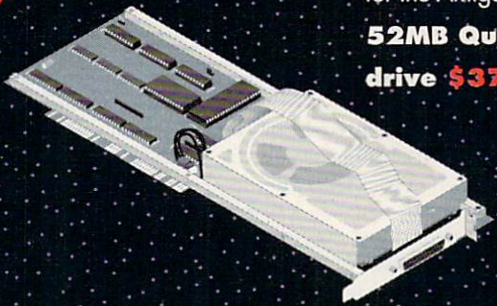
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Firecracker 24

Makes every day the Fourth of July.

By Louis R. Wallace

WHILE THE AMIGA'S custom chips still offer a great deal of power in some instances, they fall somewhat behind the mainstream when it comes to color resolution. In response, many third party developers are manufacturing hardware to enhance the Amiga's graphic display. To acquire the highest quality images available, look to 24-bit technology. As of this writing, ***Impulse*** alone offers true 24-bit color Amiga RGB display with its Firecracker 24 ($1000).

The Firecracker is a standard Zorro II card that fits in any Amiga slot in the A2000 or A3000. It comes with all cables necessary for its use and a disk with a variety of programs, including a set of DOS commands for enabling its modes. Also included is Light24, an impressive, full-featured, real-time 24-bit paint program.

Installation is very straightforward, and as long as you are comfortable removing your computer's cover and inserting a card in one of the expansion slots, you should have no trouble at all. The Firecracker's documentation walks you through the installation process in a facile, step-by-step manner.

With a Firecracker installed, your Amiga can display full 24-bit RGB images in a number of selectable screen sizes. You can choose from four horizontal resolutions—384-, 512-, 768-, and 1024-pixels wide (the larger the number, the sharper the image). Vertically, you can select either 241 or 482 lines; again, the larger number gives you a sharper, more detailed picture. For most purposes, I found the 768×482 mode the most useful, although for some 3-D work I used the higher-resolution 1024 display.

The term "24 bit" describes the amount of memory the Amiga uses to define each pixel on the screen. Each red (R), green (G), or blue (B) component of the pixel uses eight bits of information, for a total of 24. The greater the number of bits in a display, the more colors your system is capable of showing. With 24 bits, 16.7 million colors are possible. Moreover, because the Firecracker uses a pure RGB display, every pixel on the screen can be set to any one of these 16.7 million colors without limitation.

A Softer Side

Firecracker comes with utility programs that let you load 24-bit images in RGB8 (the Impulse proprietary format), Sculpt Animate's RGB format, or the standard IFF24 file format. Other commands allow you to switch between the Firecracker and the Amiga display. With these commands, you can very easily create your own presentations or slideshows using AmigaDOS batch files alone. More importantly, you can access these commands from other Amiga programs. For example, I created an interactive AmigaVision application that used the supplied commands to load and display 24-bit images while simultaneously overlaying standard Amiga graphics screens and animations.

The single most important software supplied with the Firecracker is Light24, Impulse's real-time 24-bit paint program. If you have used a paint program before, you should be up and running right away. Although the interface is straightforward and intuitive, it nevertheless contains a number of powerful and unique options.

One of my favorite commands, Load Obj, brings up a file requester for loading 3-D Imagine/Silver objects. Then, you can resize or rotate the object, or change the perspective and the lighting. When you are satisfied with the results, you can render the object with all attributes intact (except reflection and transparency). Once rendered, you can paste it or save it as a brush.

Light24's extraordinarily powerful rendering feature is sure to appeal to traditional 2-D artists who would like to add 3-D elements to their work, but would rather not invest time in learning 3-D software. A number of companies offer objects in 3-D format specifically for this purpose, or you can convert objects in other formats yourself by using software such as Syndesis' InterChange.

Light24 provides another unique option—24-bit scanning. While support is limited to the Epson ES300C scanner, it is fairly inexpensive as 24-bit flatbed scanners go, and it seems to be gaining popularity. You can choose to scan in 4- or 8-bit black and white or in full 24-bit color directly into your Light24 screen for further manipulation. Through options found within the scanner menu, you can select source regions and sizes, modify your image's brightness, and perform gamma correction.

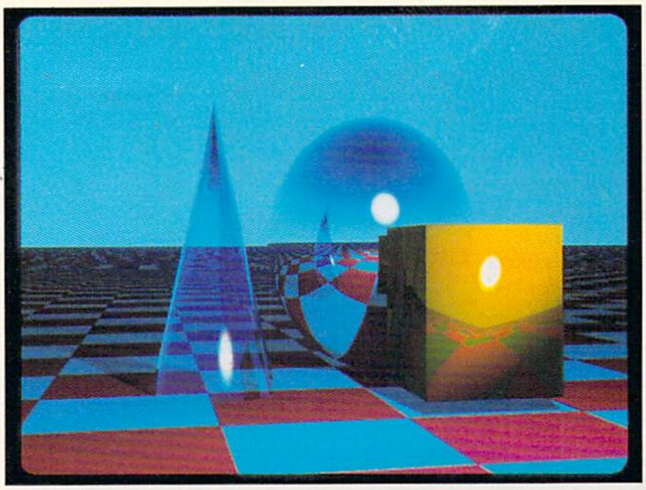
Another of Light24's options allows you to load and save palettes of up to 256 colors and keep up to eight different palettes in memory at once. Not only does loading a new palette in no way affect the 24-bit image currently displayed, but it is also a convenient way of saving your favorite colors without constantly remixing. With a couple of mouse clicks, you can create a palette containing a smooth spread of any two colors in up to 256 different shades.

Other Light24 functions include picture merging, masking (a stencil-like operation), color dithering, brush cutting and pasting (including an auto-cut option that works like a lasso), an

For information about the vendors of products reviewed, see "Manufacturers'/Distributors' Addresses" list on p. 118.

excellent multilevel zoom, virtual canvas scrolling (image sizes are limited only by available RAM), and brush manipulations like flip, scale, rotate, slide, bend, and tilt. Light24's real power lies in its real-time aspects. Whenever I drew a line, circle, or box in the program's 24-bit mode on my A3000, it performed as fluidly as DPaint in 32-color mode.

My only criticism of Light24 concerns the somewhat simplistic appearance of its interface. Impulse states that this is due to a conscious decision to save available RAM. Because extra (including virtual) screens reside in the Amiga's memory and not on the board, anything using system memory reduces the amount of RAM available for graphic screens. This explanation makes sense, and I quite agree with it.



Firecracker brings this Sculpt image into crystal clarity.



Light24 gave 3-D life to these brushes that were formerly 2-D.

The Support Group

Besides the supplied software, a number of products offer direct support for the Firecracker. Without looking too far, Impulse's own 3-D animation package, Imagine, supports the board. Other companies are joining the parade: ASDG's Art Department Pro offers direct support, Virtual Reality can provide you with a version of Vista Pro that supports the device, and Nucleus Electronics also manufactures a single-frame controller that supports Firecracker. Finally, because Firecracker supports the Amiga's IFF24 24-bit ILBM standard, you can load and display images created with just about any software package.

As mentioned previously, the Firecracker fits into any A2000, A2500, or A3000 with a free Zorro II slot. If you are using a standard Amiga NTSC monitor such as Commodore's A1084, you can connect the Firecracker directly to the Amiga's RGB output, then connect your monitor to the Firecracker. This mode of operation allows your Amiga to overlay graphics directly onto the Firecracker display, and on the same monitor.

If you are using an A3000 with a multisync monitor or an A2000 or A2500 with a flicker-reduction card, you will need to make some decisions before installing your Firecracker. If you are willing to sacrifice the flicker-free display, you can hook your monitor directly to the Firecracker as described. If you want the best of both worlds, you can hook a second monitor to the Firecracker and keep your multisync connected to its flicker-free output. This mode of operation (my preference) makes the Firecracker independent of your work display for more mundane tasks. When you want to work in 24-bit mode, just turn on the second monitor.

One of the Firecracker's most interesting uses is as an accessory to NewTek's Video Toaster. Because I prefer Light24 to the Toaster's paint program (which uses a HAM representation of its internal 24-bit image), I use Light24 to do most of my graphics work. You can load images saved as IFF24 from the Toaster into Light24, edit and resave them, and then reload them into the Toaster. For those who want the benefits of both a Video Toaster and a true RGB-paint system, this is the way to go.

Genlocks pose a slightly different problem for the Firecracker. You are free to use any external genlock, but those occupying the video slot cause problems in overlay mode. You can still use the Firecracker, of course, but in such cases you must use a second monitor. (This also holds true if you plan on using the Firecracker in the same machine as your Toaster.)

If you plan on using the Firecracker for single-frame 24-bit animation, an external genlock can easily encode the signal. You can then record onto tape. You can also make good use of the Amiga overlay feature by running Amiga-mode animations on top of exotic 24-bit backgrounds, which, after encoding them with a genlock, you can then dump to tape.

After using the Firecracker for several weeks, I am impressed. The quality of the images it generates is superb. Light24 is a very powerful, extremely useful paint package that is the perfect solution to videographers as well as traditional artists who need the higher color resolution a 24-bit board offers. ►

In fact, Impulse's approach to the Firecracker strikes me as solution-oriented. It is a solution not only for the traditional artist and designer, but also for the 3-D modeler and videographer. Multimedia authors can use it with existing software; the price is reasonable; the performance is excellent. Amiga owners who have looked long and hard at the PC and Mac 24-bit displays need look no longer. The Amiga still does it better.

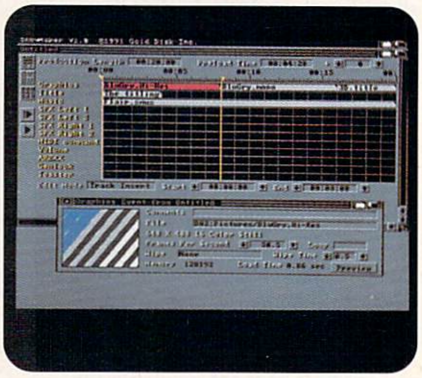
Showmaker

Everything—including MIDI sync.

By Geoffrey Williams

WHILE THERE ARE multimedia products that control external devices, few let you synchronize to devices such as MIDI controllers. Showmaker ($395) from ***Gold Disk*** is just such a product. What's more, Showmaker is a bit different from what we have come to expect from multimedia programs. It is not interactive. You cannot create buttons or assign events to function keys. It is, however, about as easy to use as any multimedia product available.

After loading Showmaker, you are faced with a display of a timeline that looks something like a graph. On the left side, you enter a list of items you plan to control. From a pulldown menu, you can select volume, sound effects, graphics, and MIDI as items. Each of these is placed on a track, so that every event in your presentation is visually represented along the set time-



Showmaker's timeline, overlayed with a window through which you assign parameters to a given track.

line. If you want to add a track, choose a new type from the pull-down menu. To add an event to a track, simply click and drag in the timeline to the proper time, and up pops a requester that lets you set the parameters for that event. You can move the event along the timeline, adjust its length, or alter how time is to be measured—in seconds, measures, or beats.

Tracking Sound

Showmaker's MIDI support—easily its best feature—sets the program apart from any other Amiga multimedia product. The Music track lets you load and play standard MIDI music files, as well as the Amiga-standard SMUS music files. SMUS files can use both Amiga and MIDI instruments. You can also set the tempo and set looping on and off. If you set a musical timebase, the entire presentation will be slaved to the tempo of music events in the music track.

The MIDI Command track lets you send MIDI commands. There are but-►



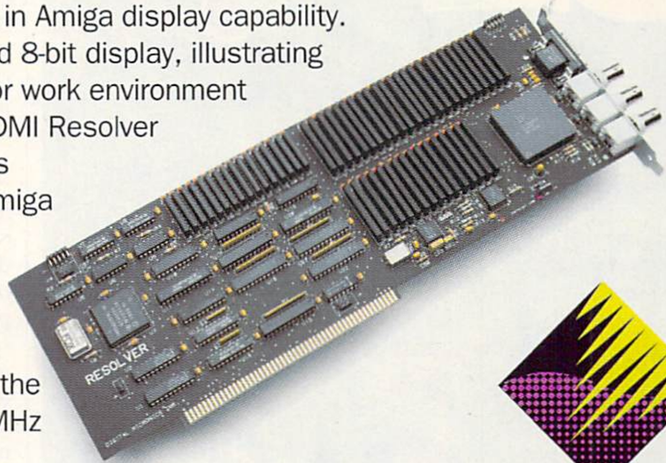
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tons to send Note On/Off, Note On, Program Change, and Pitch. Sliders let you set the Channel selection and adjust the values for Data 1 and 2.

More importantly, you can synchronize to an external MIDI clock. This means that your entire show can be synchronized to the music from an external MIDI device. One aspect not mentioned in the manual is that this arrangement makes it possible to do multi-image shows on multiple Amigas and video projectors. Because multimedia presenters still rely heavily on slide projectors, multi-image shows are very important. By slaving the Amigas to a MIDI source through Showmaker, you can make a much livelier presentation, running varying images on multiple screens.

Showmaker provides four separate sound-effect tracks, whereby you control volume, pitch, and looping (on/off). One exceptionally nice feature is a volume track that allows you to fade down the volume of all active internally generated sounds and music.

Showmaker is the only multimedia program available that can directly control NewTek's Video Toaster, although ARexx is required. While you can run Showmaker on the same computer as the Toaster, you lose synchronization whenever the Toaster takes over. I also had problems with lockups after the Toaster transitions were finished.

The proper way to use this feature is to run Showmaker on a computer connected via a null-modem serial cable to another Toaster-equipped computer. With a setup like this, you have access to some pretty slick capabilities. When you select a Toaster event, a control panel pops up that lets you set a series of up to five Toaster commands. For example, you could set a source for the Program and for Preview, select a transition, and then execute the transition. A computer running Showmaker can send graphics and animations through an encoder into the Toaster.

Showmaker can both send and receive ARexx commands with any ARexx-compatible program. You can use ARexx to load a Showmaker presentation, bring its screen to the front, and play the presentation. You can pause and restart your presentation, set the sync mode, the SMPTE start time, and the time and music time modes. A word of warning: The manual is pretty skimpy on how to do all this, so you had better know ARexx before attempting to use this feature. Since Showmaker is already set up to run the Toaster through the serial port using ARexx, it would be nice to be able to control other programs on a second computer just as easily (or even another copy of Showmaker).

It is also possible to control other external devices, such as VCRs and laser-disc players. Currently, Showmaker includes drivers for Pioneer laser-disc players, the PC-VCR, and several other devices that are not clearly explained. Nowhere does the manual specifically state which makes and models Showmaker supports, and the device driver names do not help in many cases. A better explanation is needed. Since both MIDI devices and the Toaster use the serial port, it is well that Showmaker supports multiserial-port boards.

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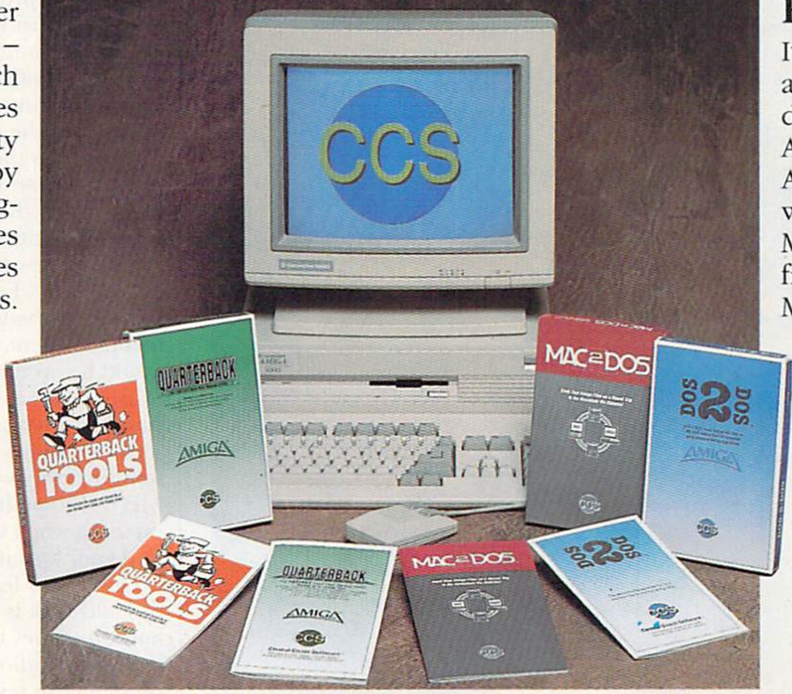
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wipes, nearly all of which, by the way, work very well with DCTV (Digital Creations) images. These transitions are very good, and the roll down looks great. You can also adjust the wipe time. The program conveniently informs you as to how much memory a given picture uses and also its load time. What's more, when you load pictures and animations, a thumbnail representation of them appears in the parameters requester.

If you plan on using DCTV images, you must save all of your screens in DCTV format, since you cannot show both DCTV and Amiga images at the same time (a major shortcoming of DCTV). There is, however, a way around this. Showmaker includes a track that controls Digital Creation's SuperGen 2000S. If you feed Amiga graphics into it as an RGB signal and then feed it the DCTV output as a composite signal, you can use Showmaker's genlock control track to switch between the two types of images.

Animations are a bit of a problem, however; Showmaker plays animations slowly. I would not suggest using Showmaker to play animations on anything but an accelerated machine, and even fast machines can bog down with hi-res overscan animations. Since Showmaker is strictly timeline based, it does not take this into account. While a requester shows you how many times the anim will play as you drag out its length along the time line, this information is irrelevant if the anim cannot play at full speed. The only way around this is to play the animation and adjust the timeline accordingly.

Another limitation with animations is that you cannot set events to happen when a specific frame plays, but only at a specific time. This means you will fiddle a lot in order to get such things as sound effects to happen at exactly the right frame during an animation. This is a bit annoying.

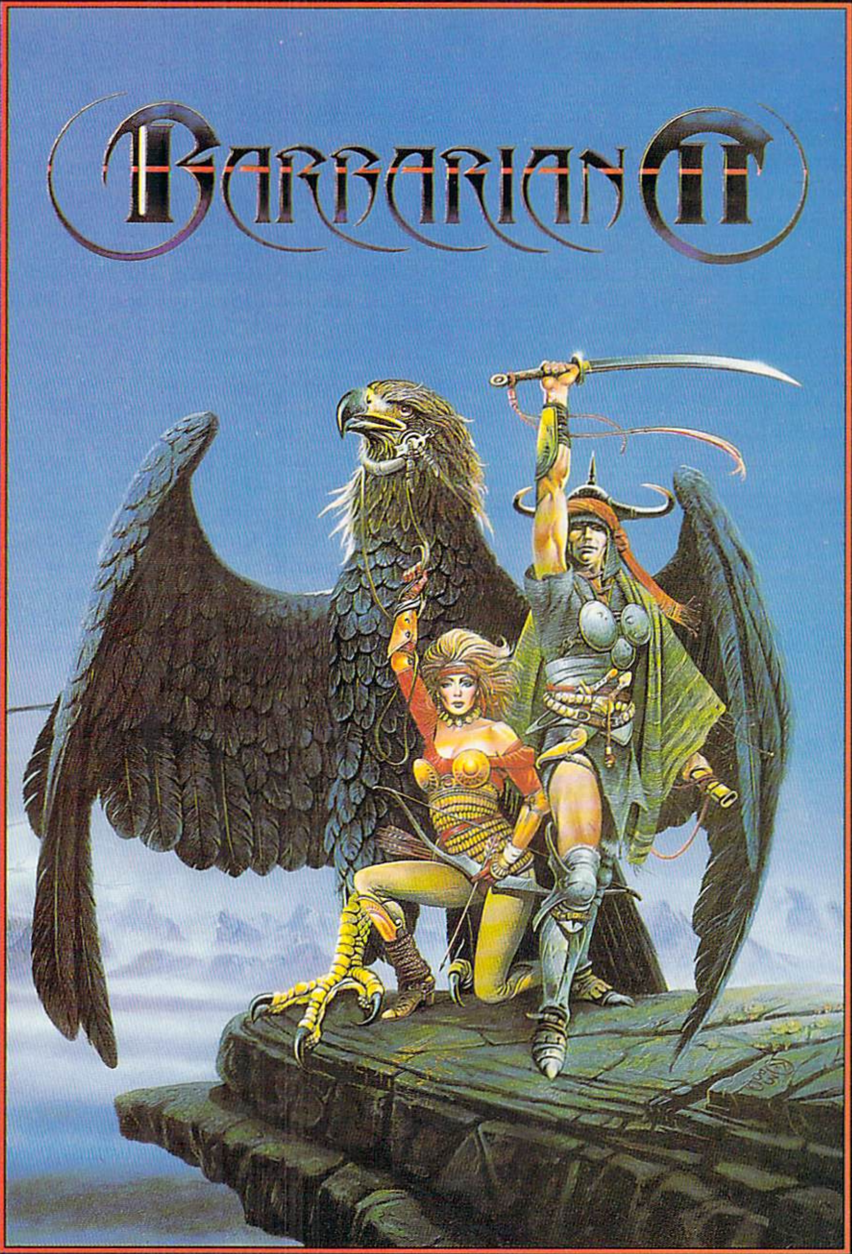
A Word On Fonts

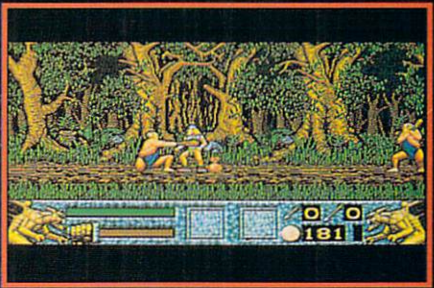
Showmaker provides some text support (and comes with a disk full of some very usable fonts, along with two disks of backgrounds), but it does not support Colorfonts. You can type in a text string, and the program automatically flies it across the screen with outlines and drop shadows.

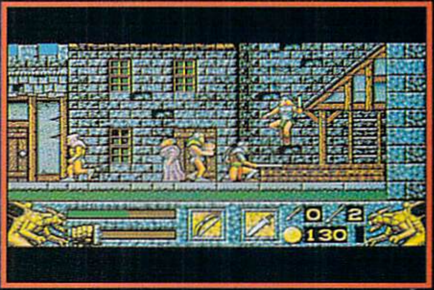
As nice as this sounds, I found it very counter-intuitive to use—one of the interface's few failings. I could seldom get the effect I wanted. It would have been much better to allow on-screen text placement, as in AmigaVision. It would be even better to be able to add brush moves as well as text moves. Another annoyance is that its assign script reassigns fonts to the Showmaker font directory without telling you, which is something you might find puzzling when other programs can't find your system fonts.

One of the features strongly touted by Gold Disk is intelligent preloading, but sometimes it feels like you're dealing with an idiot savant. I had to run a presentation several times (without changes) before it figured out the preload timing. Before you can see how it will ultimately look, every change you make requires you to run the presentation once through just to update the preloading information.

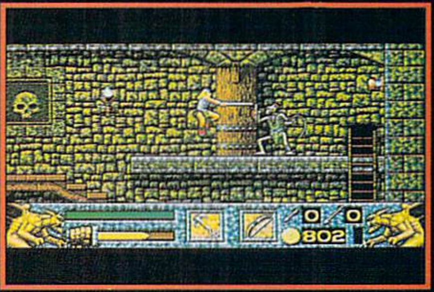
The biggest disappointment for me is that Showmaker does not directly support SMPTE time code, the stan-►











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dard method in the video world for synchronization. Instead, it supports something called Midi Time Code (MTC). MTC was designed to be a bridge between SMPTE Time Code and MIDI. It is in use in studios that heavily support both MIDI and SMPTE, but it is not at all common in most video studios. In fact, I was unable to find MTC capability in any of the Los Angeles area Amiga video studios (and they are quite well-equipped).

I understand that Gold Disk simply did not have time to implement SMPTE synchronization in this version, and that it is planned for the next release, but it should have been a top priority. MTC not only ties up a MIDI channel, but also adds considerable expense. By the way, Gold Disk suggests using the J.L. Cooper PPS-100 SMPTE-to-MTC converter ($399.95), but the less expensive PPS-2 for $169.95 will also do the job. You can contact J.L. Cooper Electronics at 13478 Beach Ave, Marina Del Rey, CA 90292; telephone 213/306-4131.

Overall, I rate Showmaker high for ease of use. It can do things other programs cannot as easily do—such as control the Video Toaster—and its MIDI features are great. Still, I would like to see the addition of better animation control and frame synchronization, some level of interactivity (even though I know this is contrary to the whole philosophy), color cycling for pictures, Colorfont support, better text handling, and transitions other than wipes—pulls and slides, for example. Since much of what you can do is relatively complex, the manual also needs some examples and additional information on external devices and other advanced features. Judging by a call I made to tech support, that service could be improved as well.

Showmaker is not a replacement for interactive presentation software, and it does require some heavy-duty hardware to make full use of it, but if you need Toaster control or synchronization to MIDI, it can do the job for you with a minimum of fuss.

HAM-E

It cuts the mustard.

By Sheldon Leemon

WHEN IT COMES to computer displays, a multitude of colors usually means a lot of money—often exceeding the price of the computer itself. If you have always thought that you couldn't afford to enhance your Amiga's display capabilities, it's time you looked at HAM-E ($299.95), from ***Black Belt Systems***. HAM-E offers admittance to the fascinating world of "true color" display with minimal fiscal discomfort.

Plug, Tweek, and Display

Installing the 8×10-inch HAM-E adapter is effortless. Simply plug your monitor cable into HAM-E and connect the device to your Amiga's RGB port with the cable provided. After you plug in the included wall transformer for power, you're ready to go. The first time you use your HAM-E, you may have to fine-tune it with an external adjustment screw (in the case of older versions, the screw is internal). I had ►

no trouble making the adjustments to my A2000, but a friend's A3000 required a bit more attention.

Fortunately, you do not need two dedicated monitors for HAM-E graphics and standard Amiga graphics. If you wish, you can display both at the same time on a split screen. When HAM-E detects a special display-line signature (called a "magic cookie"), it interprets the graphics data in a different way. Simply put, HAM-E converts a 640-pixel-wide screen to one that's half as wide, but with twice as many color bitplanes. This limits your horizontal resolution to 320 pixels, but allows many more colors on screen.

As with the standard Amiga display, HAM-E supports two basic types of display modes. The "register" mode is analogous to the Amiga's lo-res mode, whereby a hardware color register controls the color of each individual pixel. Since HAM-E works with a maximum of eight bits of data per pixel instead of only four, it can display up to 256 colors at once from a palette of 16.7 million, as compared with the Amiga lo-res screen's 32 colors from a palette of 4096.

As you might have guessed from its name, HAM-E also features an extended HAM mode. This special HAM-E mode is similar to the normal Amiga HAM mode in that it uses compression techniques to achieve 18-bit color (up to 262,144 colors at once) from eight bits of data. While the compression diminishes precise control over individual pixel color, a larger color palette makes it much easier for software to eliminate the color streaks or "fringing" that you sometimes see in HAM images.

PROLIFIC PROGRAMMING

No matter how many new graphics modes a device like HAM-E provides, they are useful only if there is software support. Black Belt has taken particular care both to develop its own software and to facilitate outside development. Consequently, HAM-E enjoys more software support than any other Amiga color-enhancement device. Bundled with it are three major programs: Convert, Register Paint, and Image Professional.

Convert lets you transform images from any of a number of standard Amiga graphics formats into a 24-bit IFF format that HAM-E image-processing and paint programs can read directly. It handles all of the standard Amiga display-mode files, including HAM and Extra_Halfbrite, the more exotic Sliced HAM and Dynamic hi-res, and proprietary formats used by some ray-tracing programs such as QRT, DKB, Sculpt, and Silver.

Although designed to run from the CLI, Convert does put up file requesters for source and destination files. Once your pictures are in 24-bit format, you can convert them to one of HAM-E's formats by using Image Professional (provided with HAM-E) or the shareware program, Render24, by Thomas Krehbiel.

Because HAM-E's hardware interprets display data differently than the Amiga's native display hardware, you can store HAM-E mode pictures as normal Amiga IFF files. This means that almost any program that can display IFF files—including interactive presentation programs like AmigaVi-

Continued on p. 100.

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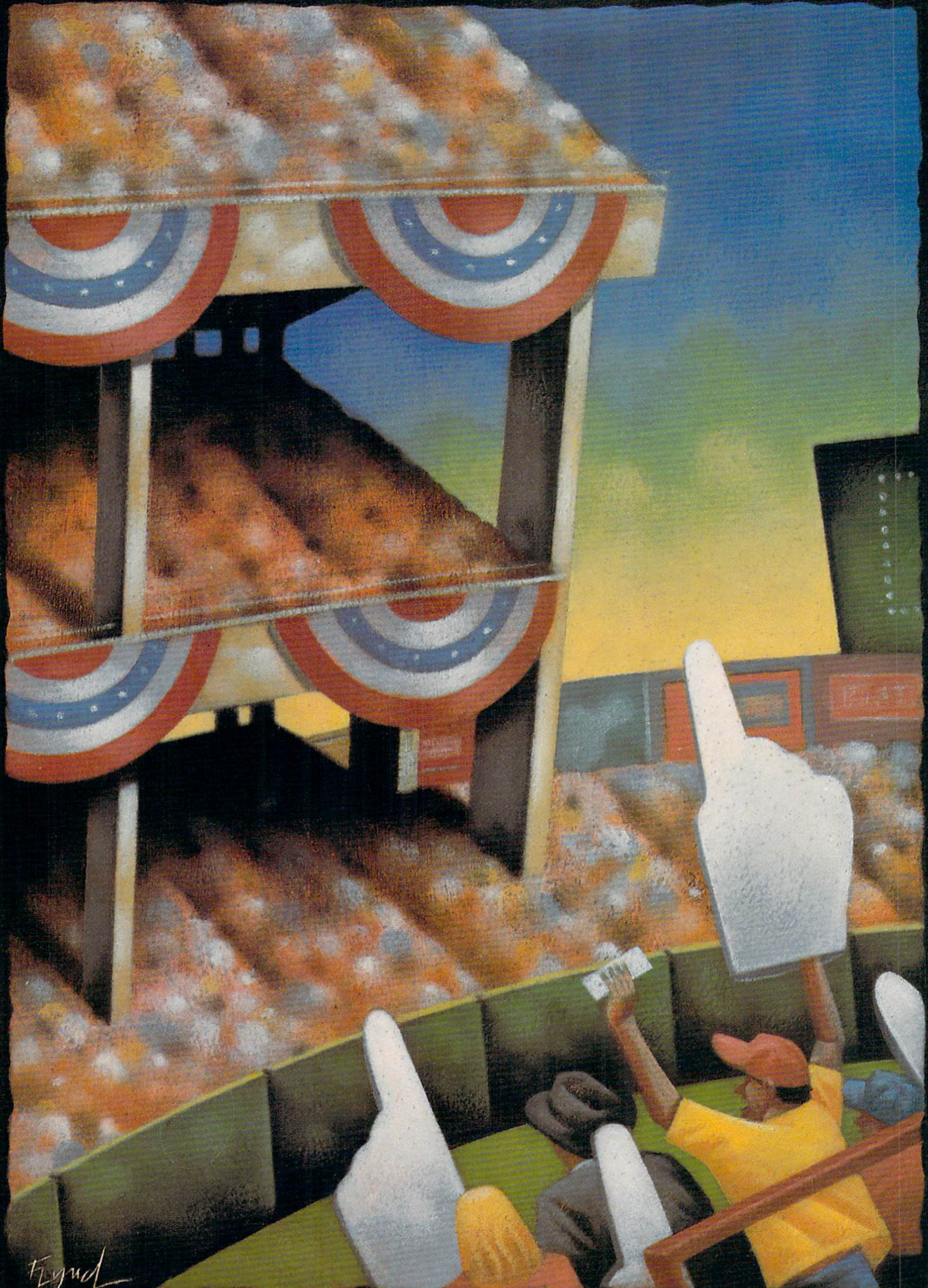
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IBM screens shown. Actual screens may vary.

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The *AmigaWorld* ALL-STAR GAMES

★★★★

AmigaWorld *All-Star Games Balloteers: Joe DiCara, Jeff James, Graham Kinsey, Rob Lawrence, Peter Olafson, John Ryan, and Leah Wesolowski*

The season is almost over. It's time, once again, to assemble a "Dream Team" from among the year's best games releases. We scouted the best, put them to the test, and came up with top plays of 1991. As with other sports, at *AmigaWorld* we choose our All-Star lineup by ballot. But we choose our choosers for their experience. Between them, our '91 *AmigaWorld* games panelists have played probably every game released for the Amiga this year, that is, since we chose last year's Top 10 (see p. 26, Nov. '90).

AmigaWorld's All-Star ballots are more complicated than those of the American and National Leagues. Our panelists rated the contenders on a scale of 1 to 10 in three areas. "How challenging is the game?" we asked. "How good are the graphics and sound?" And finally, "How likely are you to go back to play it again and again?" We then totalled and divided these scores to come up with an EFA (Earned Fun Average), which told us where each game placed on the roster.

Now, with numb thumbs, blistered firebutton fingers, and dog-eared maps depicting other worlds, our panelists come forward, not only to give you their top ten picks, but to give you some hints on how to master the masters. Please see the second part of the article, headed Pinch Hitters (p. 36), for a list of the games that would have made it onto the A-Team "if only…" For clarification as to how we categorized the games, see the sidebar, Which Position Do You Play? For some stats on the voters and their top choices of all time, see Players' Line-up. Finally, for a look at games guru Peter Olafson's public-domain and shareware choices of the year, check out the sidebar, Peter's PD Principals.

To locate game vendors, see the "Manufacturers'/Distributors' Addresses" list on p. 118. ►

ILLUSTRATED BY FRED LYNCH

The *AmigaWorld* All-Star balloteers heartily recommend all of the games listed here, saying "If you play them, you'll have fun!"

10 EYE OF THE BEHOLDER

Role-playing adventure
SSI/Electronic Arts, $49.95

The first release in SSI's new Advanced Dungeons & Dragons Legend series of first-person, WYSIWYG role-playing games, this gorgeous adventure is set in the labyrinths beneath the Forgotten Realms city of Waterdeep.

The Lord of Waterdeep has commissioned your band of adventurers to find and eliminate the source of a growing evil about the city. You and your band of



up to five other characters must fight your way through 12 tortuous levels of monsters, traps, and tricks. The graphics are excellent, and the game is exciting.

"Out-performs Dungeon Master with its superior graphics and storyline. An excellent example of the right way to port an MS-DOS product to the Amiga, Eye of the Beholder is a must-buy for any fantasy role-playing gamer." —JJ

"The you-are-there graphics and eerie sound is enough to keep you on the edge of your seat." —JR

"I didn't have to read the manual to play and understand it." —LW

HINTS:

Selection of a well-balanced party is essential to success. I've found that a party consisting of a Human Ranger, a Dwarf Fighter, an Elf Magic-user/Thief and a Human Cleric works well. —JJ

Keep your eyes open for odd-colored patches on the walls—usually a good indicator that the wall is not as solid as it seems. —PO

On Level 2, there are four horizontal runes on the walls of different chambers. Place a dagger in each to open a secret chamber. —LW

A thief is nearly useless late in the game. Map carefully and bump into every wall to discover secret doors. Don't stand in one place and bash it out with high-level monsters—slash and move instead. —JR

9 DUNGEON MASTER 2: CHAOS STRIKES BACK

Role-playing adventure
FTL, $39.95

Chaos takes up where Dungeon Master left off. Having defeated the "Dark Lord" in Dungeon Master, you find that the Lord of Chaos had forseen his demise and built a new dungeon before it took place. You command a party of four, who must enter separate dungeons to find the pieces of corbum and toss them into the Fulya Pit.

A character editor allows you to port characters from Dungeon Master and redefine them.

"Definitely not for novices. Chaos offers more ways for your characters to be obliterated than any other role-playing game that's on the market." —JJ

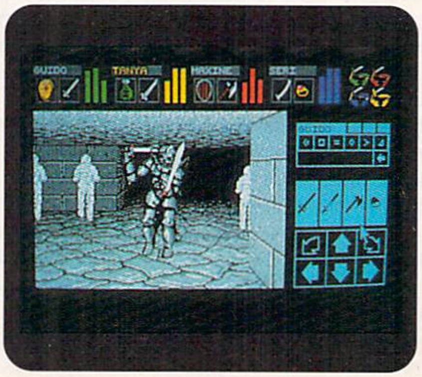
"Beautiful graphics, intriguing puzzles, and intense game play." —LW

HINTS:

Don't play this with Chaos-created characters—it's probably too tough for them. Use your team from Dungeon Master, instead. —PO

In the first room of the dungeon, spend your coins wisely. Some items are necessary for later success.

If you are continually foiled by four knights in one of the dungeons, open the trap door on the middle level and get the knights to follow you up the stairs. When all four are standing on the trap door, release it. They will fall through two levels to their demise, and



you can then pick their bones for treasure. —LW

In the first room there is a pressure plate under your characters' feet when the game begins. Moving your characters off the plate and then back onto it releases more poisonous worms into the room.—JJ

8 ISHIDO: THE WAY OF THE STONES

Strategy
Accolade, $54.95

An electronic board game that's played with tiles, Ishido has ancient, oriental roots. It looks deceptively simple at first, but becomes increasingly challenging



and demanding as you learn the skill and strategy involved.

The object is to place as many tiles as you can on the board. Depending on the combinations you create in their placement, you receive points (plan your moves carefully to create high-scoring four-way matches). You can play in solitaire or cooperative, and in tournament or challenge modes.

The Tile Editor allows you to create your own tiles if you tire of the selections available.

"Ishido is The only true challenger to Shanghai." —JD

HINT:

Use your gray matter. Plan your moves carefully. —LW

7 AWESOME

Action/strategy
Psygnosis, $59.99

With 360-degree multilayer scrolling, outstanding detail, and top-notch music, Awesome challenges you to fight your way out of a dying solar system. You must travel through eight different planets in search of fuel, weapons, and a final way to escape before your destruction. This game takes space shoot-'em-ups to new heights.



"Demands acute reflexes and changeable strategies." —RL

HINTS:

If you're having trouble getting off to a good start, try heading to Follas from Aquoss, and then to Tundrars and Volcurn. Concentrate on collecting disks and fuel from convoys. If you play your cards right at each station, you should be able to squeeze by with just enough gas and money. Don't pass up any bargains on weapons along the way, and try to buy mining lasers as soon as you can. —RL

6 THE KILLING GAME SHOW
Arcade
Psygnosis, $44.99

You, a captured criminal, are placed in a deadly game arena, where your struggle to escape is entertainment for a television audience. As you try to avoid hostile artificial lifeforms, a toxic liquid rises to fill each of the 16 pits. You can pick



up weapons and tools to help you, but you can carry only one of each. The multitudes of destructive weapons and the oodles of beasties waiting to be vaporized add to the mayhem.

A combination ladders-and-jumping game (a la Mario brothers on Nintendo) and shoot-everything-that-moves game, KGS is an an arcade-lovers dream. An instant-replay feature allows you to watch the action leading to your demise and take over just before death strikes.

"This is arcade action at its finger-blistering best." —JJ

"Exciting (in a sick sort of way) and quite a challenge." —LW

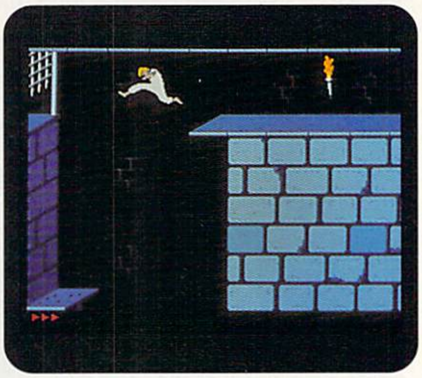
"The graphics and music are superior—few other games come close." —RL

HINT:

Besides shooting absolutely everything in sight, strategy boils down to one maxim: move it or lose it. —JJ

5 PRINCE OF PERSIA
Arcade
Broderbund, $39.95

A stunning game set in the era of the Arabian Nights, Prince of Persia finds you in the bowels of a palace, trying to make your way through multiple levels in



search of a kidnapped princess. Your ability to avoid traps and your sword-fighting skill (that is, your joystick dexterity) go a long way in determining your success or failure.

"Once past the frustrating joystick operation, you will enjoy this game immensely. Gorgeous graphics and sound." —JR

"The movement is so realistic that the joystick almost feels like an extension of your arm." —PO

HINTS:

You can often break floor tiles just by the expedient of jumping up and down on them.—JR

Be sure to hold down the firebutton as you jump and fall. It will allow you to grab ledges and thus save damage points. —PO

4 POWERMONGER
Strategy
Electronic Arts, $49.95

PowerMonger is the delightful, animated successor to Populous. As a king in search of a kingdom, you must raise



an army and conquer the world's 195 territories. Although it is essentially a war game, you must win the loyalty of the people, all of whom have different personalities. You can invent things, build weapons, spy on the enemy, trade goods, and recruit people.

Details—sounds, graphics, and information—contribute to PowerMonger's excellence. One of the game's highlights is the modem-play option.

"A truly fascinating game. With all the intricate and complex occurrences of a real world, PowerMonger is a marvel." —JJ

HINTS:

It's tempting to go instantly on the warpath and put everyone you meet to the sword. While that may work for the first few scenarios, most of the game requires that you frugally use equal portions of diplomacy and combat to achieve your aims. —JJ

Don't think in conventional terms. Sometimes it is best to avoid combat at the start of a scenario. —PO

3 INDIANAPOLIS 500
Sports
Electronic Arts, $49.95

A racing simulation? That's an understatement! Indianapolis 500 puts you on the fast track, piloting your choice of cars around the famous oval at breakneck speed.

Practice, practice, and practice some more, then enter the qualifiers and go off to the races. Indy is loaded with customizable options: different cars, a multitude of adjustments, and 32 changeable opponents.

"Never plays the same twice. Total action and realism. Demanding, yet easy at the lower levels." —JD

"Indianapolis is about the best racing game on the Amiga. Great sounds, good speed, decent graphics." —PO ►

HINTS:

Car setup is everything. Don't deviate too much from stock settings; wing adjust-



ments produce the most dramatic speed increases. Cruise control lets rookies avoid getting in and out of the throttle, which allows smooth, fast turns and helps you achieve greater lap speeds. —JD

Practice to learn the difficult transition between straights and curves, and vice versa. —PO

2 WINGS

Flight simulator
Cinemaware, $49.95

Starting as a rookie fresh at the front and green under the wings, you hop into a sputtering, prop-driven biplane. Then you're off, zoomimg, diving, strafing, bombing, and dogfighting your way through 240 thrilling WWI missions. All the while, you're chasing the elusive red baron across half of Europe. Cinemaware's trademark arcade sequences combine with an insightful (though often corny) diary of a WWI pilot to make an exciting and eveneducational game. While the final outcome remains the same each time you play (history does not change), the manner in which you arrive there and at how great a cost always differs.

"The dogfighting is sheer heaven." — PO

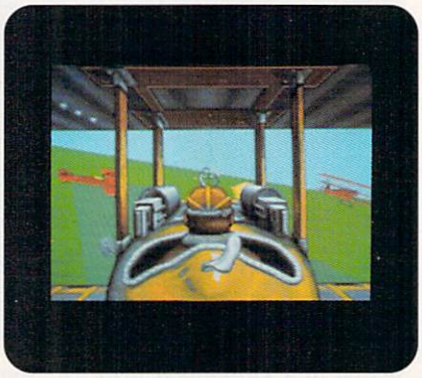
"Wings is truly greater than the sum of its parts." —JD

HINTS:

If you want to make it past the 150th mission, stay with your wingmen. It's tempting to tear off from your main group and face the German air force alone, but it won't get you far. —JJ

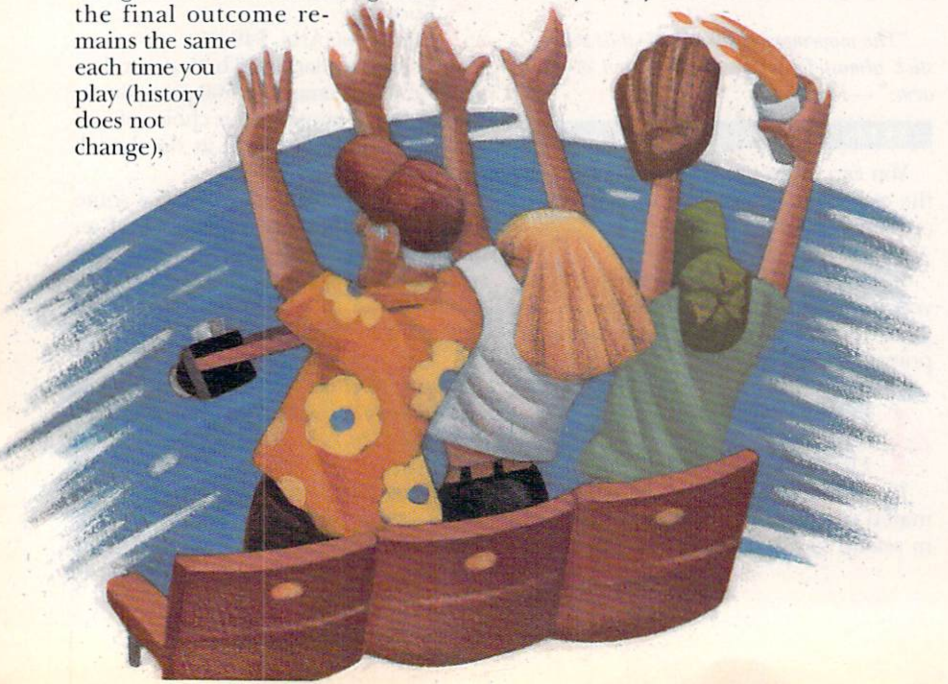
When dogfighting, come at them from behind and above. They'll never know what hit them.—PO

Don't be afraid to ditch if you take a lot of damage, get outnumbered, or see thick ack-ack. It's better to run and hide than



to die. Save your game often, and if you're going down, reboot fast! —JD

Don't wait for the perfect moment to make your shot. Your wingmen are bloodthirsty, and unless you shower with bullets the first red speck you see, you will very likely miss your chance. —RL



Which Position Do You Play?

MANY PEOPLE PREFER certain types of games over other kinds. To help you decide whether a game will pitch into your strike zone, we've categorized them below by type:

ARCADE

Arcade games challenge you to shoot, catch, avoid, or deflect objects that appear on the screen. While many arcade games require strategy, the emphasis is on joystick or mouse savvy.

STRATEGY

These games require thinking and planning. They include board-game adaptations such as Checkmate and Ishido, and other real-world games such as SimCity.

ACTION/STRATEGY

Some games emphasize strategy, but include arcade or arcade-like elements. At best, the arcade aspects are integrated flawlessly, although some excellent strategy games have been ruined by the addition of bad arcade sequences.

ROLE-PLAYING ADVENTURES

You assemble a team of wise and stalwart adventurers, equip them as best you can, and send them out into an imaginary world to pursue your aim. The challenge of these games is to develop characters that can overcome a final obstacle. Role-playing games generally require a greater time investment than any other type.

FLIGHT SIMULATORS

These games put you in the cockpit of an aircraft and feature ever-changing 3-D graphics that simulate the plane's movement through the sky.

SPORTS

Sports games simulate the play of a particular sport. Although some stress arcade skills while others stress strategy, their appeal is in letting you live out your sports fantasies.

GRAPHIC ADVENTURES

Like the older-style text adventures that offer text-only descriptions of your surroundings and accept typed responses, graphic adventures lead you through imaginary worlds, where your wits determine your progress. Graphic adventures, however, use images to enhance or replace text descriptions and usually have shorter or less detailed plots.



1 LEMMINGS

Action/strategy
Psygnosis, $49.95

Lemmings challenges you to save the lives of suicidal, green-haired rodents on 120 levels of mayhem. You must guide the lemmings from the entrance of the screen to the exit within a specified period of time and with minimal loss of lemming life. To aid you in this endeavor are several special abilities that you can assign to lemmings. The scenario generator/editor keeps this game from ever getting old.

"One of the most ingenious and entertaining game releases for the Amiga." —JJ

"Don't expect to sleep until you're done. Insanely addictive." —PO

HINTS:

Don't want to explode your blockers? Digging the ground out from under their feet transforms blockers into normal lemmings. —JJ

Always pause the game after entering a level, and scroll around to have a good look at the task facing you. —PO ►

★ ★

Player's Lineup

BESIDES ASKING OUR panelists to select the top games of the year, we asked them to tell us their favorite Amiga game of all time.

Joe DiCara and his three sons became "immediately hooked" on computer games when they bought a Mattel Intellivision ("we probably bought every game made for the machine"). Later, in searching for the "ultimate game machine," they found the Amiga—and got hooked on action simulations.

Is it any surprise then that Joe's top pick of all time is Indy 500 (this year's number 3)? He likes it because it is realistic, complete, and easy to control, but mostly because it "guarantees hours of fun and challenge."

"Absolutely the greatest," says Joe.

Jeff James, a college senior, began delving into computers and games with equal vigor in the eighth grade. Pen-and-paper RPGs and war games soon gave way to gaming "on every computer Commodore has had the temerity to make."

Number one on Jeff's all-time hit parade is Cinemaware's Rocket Ranger ($49.95). "With a superlative plot, plenty of arcade action, and a Risk-like strategy portion, Rocket Ranger made me feel like I was actually there, saving the Earth."

Hint: Pay particular attention to the strategic elements. Keep a list of the countries you have searched, so you won't waste a lot of time backtracking.

Graham Kinsey, a former product demonstrator for Commodore, has reviewed scores of games—both commercial and public domain—not only for *AmigaWorld*, but also for *Amazing Computing*, *Compute!*, and the former *Commodore Magazine*.

Graham's favorite game of all time is Empire ($49.95, Interstel), a game of conquest. "Empire has a truly elegant user interface that allows for almost effortless control. How many other games would you still be playing four years after you bought them?"

Hint: Never stop looking for neutral cities, even when you're entrenched in attrition-style combat.

At the age of six, Rob Lawrence, now a high-school senior, kept his parents busy trying to drag him out of arcades. When they got him home, he played games on an Atari 2600 and a C-64. Now he devotes his free time to Amiga entertainment, especially fantasy role-playing adventures.

Rob's favorite game of all time: Ultima IV ($59.95, Origin Systems).

"The Ultimas are highly interactive adventures in which you create or recruit characters to defeat evil. There are vast worlds, cities, and dungeons to explore, and each game usually requires hundreds of hours of playing time. Ultima IV is a true masterpiece, wherein only the keen and perceptive can survive. It draws you in to the point where you no longer just play the game; you live it."

Hint: Here are a couple of words to live by: VERAMOCOR, INFINITY...

Peter Olafson, author of *AmigaWorld*'s monthly games-tips column, Crib Notes, is the games topic leader on GEnie's Starship Amiga. He is also an assistant sysop in that network's Games Roundtable. His work has appeared in *Computer Gaming World*, *PC Games*, and *Compute's Amiga Resource*.

Peter's all-time favorite game: Zak McCracken and the Alien Mindbenders ($19.95), an adventure from Lucasfilm Games. "The games I bought around the same time I bought my Amiga (in 1987) left an indelible mark on me, as did the Amiga's enchanting technology. These included Zak and Carrier Command, but Zak wins on a technicality. We love Zak for its detail, puzzles, size, its spoofs of pop culture, the corny disguises the aliens use...and because Zak just seems to be a regular guy."

Hint: The temple mazes will prove confusing unless you map them.

John Ryan has written scores of game reviews for *AmigaWorld* and for *RUN*, the C-64/C-128 magazine. His favorite game of all time is Reach for the Stars ($44.95, Strategic Studies Group), a strategy title. "A supreme study in strategy and tactics, this game is so configurable and playable that I find myself coming back to it time and time again. It's the only game that has found a permanent spot on my hard drive."

Hint: Place a ring of fighters around important planets to act as a tripwire in case of attack. Invest heavily in technology as soon as possible in order to develop Class 4 ships.

Leah Wesolowski, a serious games enthusiast, has written on the subject of games for both *AmigaWorld* and *Computer Gaming World*. Leah shares Graham Kinsey's taste in choosing Empire as her absolute favorite. "Where is it written that a game must be full of wild graphics and a Grammy-winning score to be good? Empire is a no-frills game that's full of good, clean fun!"

PINCH HITTERS

It's hard to limit the best games to ten. Here are ten more that qualify to pinch-hit for the A-Team:



11 THE IMMORTAL

Role-playing adventure
Electronic Arts, $49.95

Using a joystick, you guide a wizard in search of his mentor through eight levels of over 50 rooms filled with traps, monsters, and other obstacles. Gameplay is often fast and furious; 3-D graphics and animations are gorgeous.

"Games come and they go. The Immortal is a work of art, and it will endure." —PO

Hint: The code to enter level 2 with full supplies and in perfect health can be found in the manual. —PO

12 ARMOUR-GEDDON

Action/strategy
Psygnosis, $49.99

A sophisticated concoction of intense wargaming and arcade action. To save the Earth from destruction, you must develop vehicles and weapons while fighting a relentless opponent.

"Blows away almost every other Amiga 3-D simulation I've seen. In my opinion, this is the best game of the year." —RL

Hint: Learn to use telepods. They are the key to the game. —PO ►

Peter's PD Principals

TWO THINGS QUICKLY became apparent when I set out to choose the best 10 shareware and public-domain games of 1991. One is that this process has actually become easy. There's no more scrambling through the disk box when I get to number seven, and there's nothing really mundane in the bunch. (I'm only sorry about the handful I've had to leave out.) These games are becoming, in many cases, next to indistinguishable from their commercial counterparts in play, graphics, and sound.

The second is that, as with commercial games, much of the best work is now coming from overseas—especially from Europe, where the Amiga enjoys a position as the preeminent game computer. Roughly half of these games are from outside the US.

10. ETERNAL ROME

By Sven Hartrumpf

A complex, multiplayer strategy game of conquest, set in the Imperium Romanum. Available on many BBSs in a "tryware" sample version.

9. HEADGAMES!

By Neil Sorenson

Sorenson has established himself as one of the premier shoot-'em-up construction-kit game creators. His two other games—Webz and the recent Crypt of the Necromancer—are both worth your attention, but this stylish shooter is his gem.

8. A tie:

JUST YOUR BASIC MISSILE COMMAND
By Max Bithead

There've been several attempts at Missile Command on the Amiga, and this one, to my mind, is the best and most authentic.

AMEGARACE
By Leopold Soft

A seamless and hopelessly addictive version of a classic stand-up arcade game.

7. WIZZY'S QUEST

By Guido and Soren Appenzeller

This German game (rather in the style of Electronic Zoo's excellent Spherical) is unlike anything else here—and there's precious little like it for the Amiga in general. It's a finished, high-resolution, 50-level arcade game with all kinds of charming touches. It casts you as a wizard who must create and dissolve blocks to free a computer-controlled companion. And then get yourself and your companion out the exit door. Not easy, but there's a password every five levels, so you can pick up where you left off.

6. Megaball/Megaball 2.0

By Ed and Al Mackey

OK, OK, I suppose Breakout clones are a bit old-hat these days, but this one is every bit as good as the commercial versions (if not better), with fluid play and sterling graphics and sound. And if you register your copy (for $15), you will get a MegaBall editor.

5. NEBULA

By Steven J. Smith and Paul N. Gould

This is a glorious three-dimensional shoot-'em-up from Australia, with polygon-fill graphics rather in the style of Stellar 7. But it is blessed with remarkable speed and lots of nice features (not to mention that the enemy vehicles blow up very nicely).

4. OMEGA 1.5

Port by Klavs T. Pedersen

Imported from the IBM world, Omega is a giant hack-and-slash game in the fashion of Hack, Larn, and Moria, but with a stronger role-playing flavor. It has a good-sized city, a handful of villages, and the usual dungeons, and there's a good amount of character interaction.

Although Omega has been out for a couple of years with monochrome, character-based graphics, seeing this real Amiga version—with color graphics in the style of the Ultimas—is like seeing it for the first time.

3. DUNGEON

Translation by Loren J. Rittle

I have always wanted to play all three of the Zorks as one game. (Infocom put them under one wrapper, but did not link the programs.) With Dungeon, that's finally possible. An Amiga version of the original DEC mainframe game, it contains most of the material that appeared in the commercial versions, and it is simply a joy to visit an intact Great Underground Empire.

2. LLAMATRON

By Llamasoft

A knockout version of the old arcade game, Robotron, in which you are charged with dispatching a hilarious assortment of nasty Gaunts (ranging from soft-drink cans to Zippy the Pinhead-type faces) and saving friendlies (known as Beasties). This English game is simple, but—packed with sound, visions and general silliness—it exploits to a T the power of the Amiga.

1. RINGS OF ZON

By George Broussard

This US-made shareware game, the first of a trilogy, is a superb Amiga adaption of the famous Kroz adventures on the IBM. With such gorgeous music, tough puzzles, stylish looks, and a long shelf life, it's difficult to imagine any adventurer having the heart to put this down.

—Peter Olafson

13 **ELVIRA: MISTRESS OF THE DARK** —Graphic adventure
Accolade, $59.95

Explore the 800-room Castle Killbragant, dispatch its inhabitants, and solve its puzzles as you try to rescue Elvira.

"It's sexy and violent, and perhaps too much for the younger set. But there's lots going on: vibrant graphics, great sounds, and slick gameplay, to name a few."—PO

Hint: Get every herb and spice, no matter what the risk to obtain it. —JD

14 **SHADOW OF THE BEAST II**
Action/strategy
Psygnosis, $59.95

This sequel to the original arcade game is much more of an adventure, with more difficult puzzles, character interaction, and a deep, dark game world. The graphics and animations are really extraordinary.

"Better than the original" —GK

Hint: If you can't solve one puzzle, move ahead to another. They are often related. —PO

15 **F-19 STEALTH FIGHTER**
Flight simulator
MicroProse, $59.95

Fly an F-19 or F-117A in thrilling missions against a variety of real-world opponents. Easy to learn, yet complex, with scores of on-board features and hundreds of missions.

"Offers a myriad of flying options that hard-core flight-sim fans crave. Really comes to life on an accelerated Amiga." —JJ

Hint: Keep a low profile. —LW

16 **THE SECRET OF MONKEY ISLAND** —Graphic adventure
Lucasfilm Games, $59.95

You are Guy Threepwood, a would-be pirate who must prove himself by completing three difficult trials. Detailed graphics, witty dialogue, and a surprise ending.

"A delightful mix of humor, swashbuckling adventure, and mind-bending puzzles. A welcome change from the all-too-standard alien zapping and dragon-slaying." —JJ

Hint: Pick up everything you come across. Even red herrings can be put to good use. —PO

17 **BANDIT KINGS OF ANCIENT CHINA** —Strategy
Koei, $59.95

You, the famous Bandit King, must gather together enough followers and territory to challenge the evil Gao Qui, who has seized power.

"Combines warfare, politics, and ancient Chinese culture into a smooth, great-looking game that exploits many of the Amiga's strengths." —JR

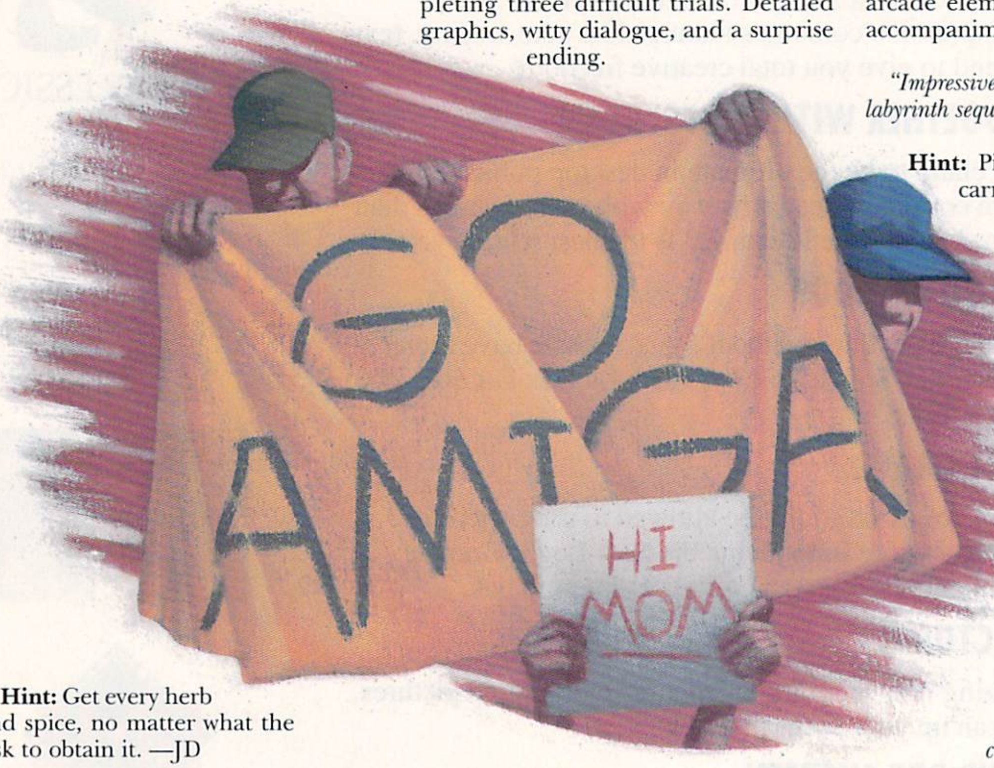
Hint: Don't spread your army too thin. Keep one territory strong so you can counterattack if your weaker territories become overrun. —JR

18 **OBITUS**
Role-playing adventure
Psygnosis, $59.99

Obitus combines the exploration of forests, mines, and underground complexes with parallax-scrolling arcade action. The game is similar to Dungeon Master, but with slicker graphics, more arcade elements, and moodier sound accompaniment.

"Impressive fluid-frame animation in the labyrinth sequences." —RL

Hint: Pick up everything you can carry. —JJ



19 **CARTHAGE**
Action/strategy
Psygnosis, $44.99

A cross between Ben Hur and Risk, Carthage mixes arcade chariot-racing with Byzantine strategic options. You must organize and lead a strategic defense against a multiarmy Roman invasion of Carthage.

"The only war game that includes a real-time, tactical-level combat segment." —GK

Hint: The roads used in the chariot scenes are not very random. Learn to recognize the patterns of dead wood to save time and money. —GK

20 **STAR CONTROL**
Action/strategy
Accolade, $49.95

Join either the despotic, power-hungry Ur-Quan confederacy or the peaceful Alliance of Free Stars in a bid for galactic dominance. Choose either a pure arcade shoot-'em-up or play the full strategy game. Nice graphics; excellent sound effects.

"The two-player modes are really a tremendous blast. Nothing beats frying your friend in a congenial game of galactic conquest." —JJ

Hint: Always use any special weapons at your disposal. —JD ■

Built *to* Blast:

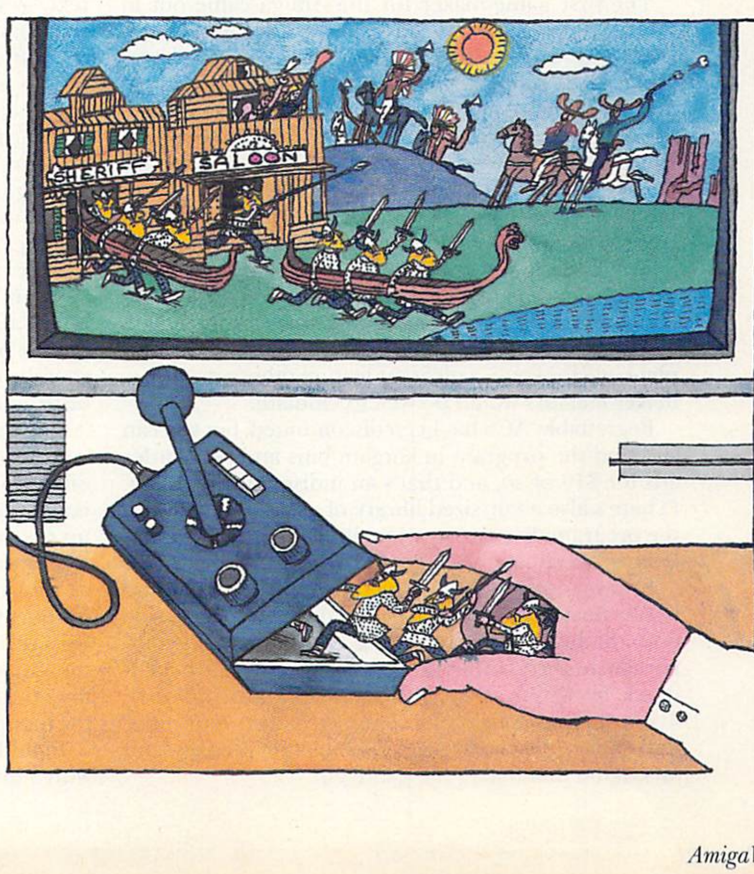
A GUIDE TO DO-IT-YOURSELF GAMING.

Game-construction kits aren't just for text adventures anymore. Now you can build your own fun—no matter what your style.

By Peter Olafson

It has happened to most game players at one time or another. You buy a game. You play the game. You dislike the game. With a vengeance. You glare down the throat of your 14-inch monitor and growl, "Even I could do better than this." Maybe you even say something that cannot appear in a nice family Amiga magazine.

For most game players, that's an empty boast. They may be muscle-bound mercenaries, or elf paladins, or cyberpunks, but most are not programmers. They may have the drive and imagination to build a game, but they don't have the skill or the tools. Talk to them about "code," and they'll ask for the password to "Mayhem" Level 30 in Lemmings. Mention a subroutine, and they'll boot up Wolf Pack.



The tools—game-construction kits—keep arriving, however, and there has never been a better time for Amiga owners to take the power of game-making into their own hands. The kits aren't just for text adventures anymore, either. Programs are also available for building shoot-'em-ups, war games, and graphic and three-dimensional adventures, and there are any number of scenario, level, and map editors around. All it takes is a few sheckels and the uninterrupted use of your left brain.

Some organizational and planning skill is useful, too, however. You can jump into a game-making pro- ►

gram and just putter around, but, as with most long trips, you're not going to get much of anywhere unless you bring a map. Keep in mind also that while many of these programs don't require programming experience, it certainly doesn't hurt, and it may take the sting out of a long learning curve. None of these are exactly boot-and-shoot products.

Surveying the Possibilities

Caveats out of the way, here's a map of what's available in the do-it-yourself field. There are currently at least half a dozen products on or close to the market, with others in the public domain or available as shareware.



If you get tired of the task of creation (even God rested on the seventh day, after all), you can have ACS write a new adventure on its own.

And still others are looming around the corner. (For instance, we can expect a Lemmings construction kit from Psygnosis later this year, and a Bard's Tale kit from Interplay sometime early in 1992.) We'll try to touch on all of the current batch in this survey.

The first game-maker for the Amiga came out in 1985, when Electronic Arts ported Stuart Smith's charming Adventure Construction Set (ACS) to its favorite home computer. This collection of three easy-to-use construction sets—fantasy, spy/mystery and science-fiction—allows you to create graphic adventures very like the the ones with which the designer made his name (Ali Baba and Return of Heracles). There's space in each for 240 rooms, 335 text messages, and 500 creatures—either the ones supplied with the game or new ones designed according to your own tastes.

If you get tired of the task of creation (even God rested on the seventh day, after all), you can have ACS write a new adventure on its own or finish an incomplete one for you—a pleasant feature other adventure-maker creators would do well to emulate.

Regrettably, ACS has been discontinued, but you can still find the program in bargain bins and mail-order ads for $10 or so, and that's an indisputable bargain. (There's also a fair-sized library of games created with the program that can occasionally be found on bulletin boards. You'll need ACS to play them, however.)

It wasn't long before the first Amiga text-adventure maker turned up, and since then there have been several, the best of them allowing a sophistication comparable to the games released by Infocom (the benchmark by which all text adventures are judged). Typically, they consist of a compiler to turn your prose into game code, a debugger to bomb the mistakes, and an engine that makes the game go.

By my count, there are at least three text adventure-making programs available either as shareware or in the public domain: **ADVSYS** (a 1986 program by David Betz), the **Adventure Definition Language,** or ADL (Tim Brengle and Ross Cunniff, 1987), and **Gamescape** (Dennis Drew, 1988). You should be able to find these on electronic bulletin boards or for a nominal fee via the mail-order houses that deal in user-supported software.

Then, in 1989 came Kevin Kelm's Text Adventure Construction Language, or TACL, as it is usually known, a commercial product offering the ability to construct text adventures with graphics, speech, sound and music—and virtually unlimited in size. (You can find a demo pack of sample TACL adventures, as well as the distributable adventure player, on bulletin boards and in disk collections.) We haven't heard much about it lately, but the program is still around. It's been in the cocoon of development for 13 months, and by the time you read this, it should have reemerged from its TACL box as ***Aegis/Oxxi***'s **Visionary**.

Visionary won't have anything in common with TACL beyond the author and a five-figure room limit. It's described by Aegis as a "virtually open-ended development system"—designed for both the novice and the experienced programmer—that uses 60 commands, a set of graphics tools and 19 mathematical operations to reduce technical barriers to the creation of text, graphic and animated Sierra-style adventures, thus leaving game authors greater freedom to pursue their art.

This is a BASIC-type game-creation language rather than a construction kit, but Visionary's mother tongue isn't far removed from the English language. It's possible for the nonprogrammer to scan the source code and figure out roughly what's going on.

Yet, despite that aimed-for ease of use, the size and complexity of Visionary games can be staggering. They will accommodate up to 65,534 rooms and 65,535 objects and non-player characters (each with 32 attributes) and the same number of subroutines. They can handle up to 25 IFF graphic screens, 25 digitized IFF sounds or ten fonts and ten animations in memory at once, and almost 4.3 *billion* characters of text.

The production notes indicate that the only real limit is the amount of memory available for compiling. In other words, you can create a finished game world that is almost incalculably large, or incalculably deep. That's up to you.

The program had just completed pre-release testing as this article was being prepared, and the finished product was due out Oct. 1 at a price of $99.95 (watch for a review in a later issue). Oxxi also plans to release the Visionary Interactive Editor—a text editor that automatically corrects syntax—on Nov. 1 as an upgrade for registered owners.

In addition, there's a Visionary book in the works, with a disk of libraries, and there will be a section de- ►

voted to the game-maker in Enchanted Realms (Digital Express), a magazine devoted to Amiga adventure games.

The Field Expands

Visionary is not the only dedicated game language out there, however. There is also **AMOS The Creator**, ***Mandarin/Europress Software***'s Amiga version of its STOS, originally released on the Atari ST.

AMOS, however, is a more general language that can be used to create graphic-adventure or parallax-scrolling arcade games, demos and educational programs, or even, according to the developer, video-titling sequences of graphical databases. This weighty package includes a sophisticated AMOS Basic (with 500 commands), a sprite editor, four sample games, 80-plus sample programs, a 300-page manual and the first issue of the AMOS Club newsletter.



You're probably muttering to yourself, "I could do better." Go ahead. Build your own. Go nuts. We've handed you the keys.

The Creator's creators have introduced an add-on disk containing a slew of new features, two upgrades (1.2 and 1.3, the latter adding 68000 assembler commands), and a compiler (itself upgraded) that is said to double the speed at which AMOS-built programs run. Also included is a compactor that crunches the programs an average of 60 percent. Moreover, a burgeoning library of AMOS-based games—in addition to those that come with the program—has begun to turn up on these shores via disk collections and BBSs, and I've recently seen an impressive demo for a three-dimensional version of the product.

From a similar school—but in the opposite direction geographically—is the **Blitz Basic** compiler from ***Memory and Storage Technology*** (MAST) of Australia. It's a speedy BASIC that's designed to make use of the Amiga's custom chips, and it also emphasizes ease of use within its integrated environment. If you know BASIC, then learning Blitz will be a breeze. I don't know BASIC, but I've played a couple of games created with Blitz, and found them fast, colorful, and fun.

There are some realms of game-making that I thought would never come under user control, and one of these was the three-dimensional polygon-fill adventure. I should have just shut my mouth and watched, because here it is. ***Domark***'s **3D Construction Kit** is a commercial version of Incentive Software's Freescape system—the engine used to create Total Eclipse, Dark Side, Driller, Castle Master and other games (a handful of which saw release in this country under Cinemaware's Spotlight label).

Essentially, the program permits you to select, color, edit or even design outright polygon-fill objects, assign them characteristics, place them in an environment, add scripts and sampled sounds, and then save the whole thing as a stand-alone game. (As with Visionary, the kit isn't necessary to play it.) 3D Construction Kit comes with a fine game of its own, which should give you some bright ideas as to what to do. The product is currently available only as an import, but is expected to be released domestically via Accolade—under a still-undetermined name incorporating "Virtual Reality"—late this year or in the first quarter of 1992.

Another English import is The Shoot 'Em Up Construction Kit (released here by Accolade under its Avantage budget line). Regrettably, it is out of print, but it can be found on budget racks and via mail-order houses at prices of around $15. The Kit consists of seven linked editors that govern sprites, objects, backgrounds, IFF sound samples, enemies, waves, and levels. Together, they can be used to create stylish, stand-alone, vertically-scrolling arcade games—complete with title and instruction screens. You might want to see what S.E.U.C.K. can do before you plunge into some other program. Three good sample programs come on the second S.E.U.C.K. disk, and there's a library of about 30 shareware or public-domain games.

Another Strategy

If you prefer a more strategic approach to your shooting, you might want to look into war games. And there are a lot of them that can either be built from scratch or have some editing function: Paladin, Breach 2 and the forthcoming Rules of Engagement from Omnitrend/Mindcraft, Interstel's classic Empire, Three-Sixty's Harpoon (which has a separate scenario editor), and Medalist's Universal Military Simulator II (whose Planet Editor should be out by now).

Then there's ***SSI***'s **Wargame Construction Set**, which was released for the Amiga last year. WCS allows you to recreate battles from virtually any era, or to create fantasy encounters. You draw the map; you set 14 factors for each unit, ranging from type to strength to weapon; you determine how intimate the combat will be (from man-to-man to strategic level); and then you can test it out—either against the computer or against a friend. Naturally it's a war game as well, with eight scenarios of its own—both one- and two-player—which you can tinker with to your heart's content.

Then again, if you've read this far, you're probably muttering to yourself, "I could do better." Go ahead. Build you own. Go nuts. We've handed you the keys. Now's your chance to prove it. ■

Peter Olafson writes the monthly Crib Notes column for AmigaWorld*'s Game Preserve section. Write to him at 222 Henry St., Garden Apt., Brooklyn, NY 11202.*

The Amiga Troubleshooter's GUIDE

A little do-it-yourself troubleshooting can cure a lot of technical headaches.

Check out this self-help course to find out how.

By Sheldon Leemon



IF YOU TURN on your Amiga and nothing happens, or if you pop in your favorite program and it suddenly fails to load, your first reaction might be to gather up your wounded charge and run to your nearest service center for a complete overhaul. According to some Amiga service technicians, however, up to half of the computers brought in for repair suffer from nothing more serious than misinstalled expansion boards, flipped switches, or software that has gone slightly awry.

Unless there is blue smoke pouring from the back of the machine, your problem may be a simple one you can fix yourself—once you recognize its true nature. Even if your problem requires expert assistance, a little diagnostic work may reveal which source can best help you and what information you can offer in expediting the repair.

The Symptoms

A prime identifying symptom is the frequency of the problem: How often and how consistently does it occur? Some problems crop up every time you turn the computer on, while others appear only in certain circumstances. At the latter end of the spectrum are the problems that occur only once and go away by themselves, such as an unexpected guru visit or a balky program that will not respond to your command. You needn't consider these real problems. Whether you attribute them to a momentary power spike, a runaway program in a multitasking system, or cosmic rays, you can write them off as simply one more episode in the the weird world of computing.

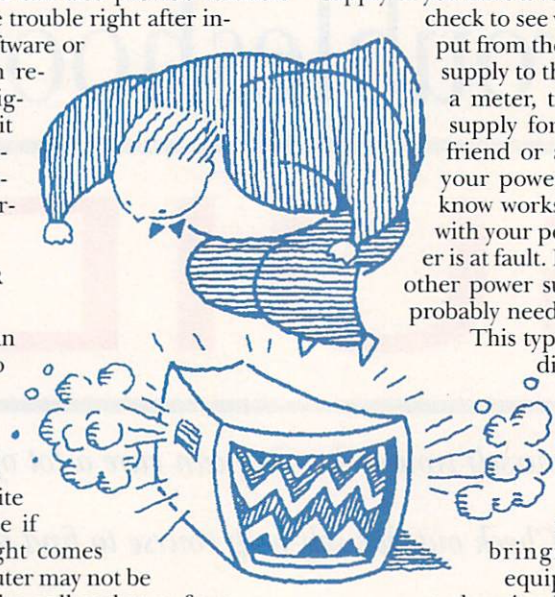
One good way to determine if a problem is just a fluke is to turn off the computer and peripherals, let them sit for a few minutes, and then turn everything back on and try what you were doing over again. By doing this, you can make sure that a program you were running earlier did not leave some residual fallout (corrupt memory list, invalid pointers, and so forth) that later caused the problem.

At the former end of the spectrum are blatant, persistent problems, such as a computer that appears to do absolutely nothing when you turn it on, or a printer that never prints. Although this kind of trouble may appear to be the most serious, it is often the easiest kind to diagnose and to remedy. The first questions to ask are the obvious ones: Is the computer ►

ILLUSTRATED BY RAYMOND MEDICI

plugged in? Is the power turned on? Are all the cables connected tightly? Because a computer system is composed of many interconnected parts, the key to troubleshooting the system is to methodically check every possible link in the chain, one at a time.

When a problem started can also provide valuable clues. If you begin to have trouble right after installing a new piece of software or hardware, see if you can restore your system to its original state in order to get it working again. Then, review the installation procedure to see if you have forgotten some step.



Hardware: Test Your System

Let's take the example of an Amiga 500 that appears to do nothing when you turn it on. Your first reaction might be that "the computer is broken," but things are usually not quite that simple. Check to see if the computer's power light comes on. If it doesn't, the computer may not be getting any power from the wall socket or from its own power supply. To determine whether the wall outlet is supplying power, unplug the computer and test the outlet with a lamp you know to be in working order. If your computer equipment is connected to a power strip, check to make sure that the switch on the power strip is on and that all the outlets are working.

If the outlet is fine, you should next check the power supply. If you have a voltmeter or multimeter, you can check to see whether there is any power output from the plug that goes from the power supply to the computer. If you do not have a meter, try substituting another power supply for yours. Take your system to a friend or an Amiga dealer, and connect your power supply to an A500 that you know works. If the other computer works with your power supply, then your computer is at fault. If your computer works with the other power supply, then your power supply probably needs fixing.

This type of investigation may seem tedious, but a computer system is composed of many parts, and the only way to identify the location of the problem is to isolate each part and test it individually. There is nothing more frustrating than bringing one piece of computer equipment to a service technician and paying him to examine it, only to find that it is working perfectly well and that you have to bring in some other piece to test. ►

In for Repairs

IF YOU FIND you cannot avoid a trip to the repair center, it pays to be prepared. Most service technicians charge by the hour, so anything that you can do to facilitate the process will save you both time and money.

The most helpful thing you can do is to make it as easy as possible for the repair person to recreate the problem. Service technicians cringe when they hear a complaint like "every once in while the screen goes goofy."

Be as specific as possible when it comes to describing the problem and the circumstances under which it occurs. Bring along every piece of hardware and software that may be involved. If your disk drive will load programs from some disks and not from others, bring examples of both. If you are in doubt, call ahead and ask the technician what hardware and software to bring.

If you have more than one local service center from which to choose, you may want to find out more about the facilities at each. Ask if they can do component-level repairs, as opposed to merely swapping out subsystems, and if they are capable of fixing monitors. Be wary of drastic solutions: For instance, if you are told that you need a motherboard replacement (a fairly expensive proposition), get specific details on what repair efforts were made before agreeing that your original board is beyond repair.

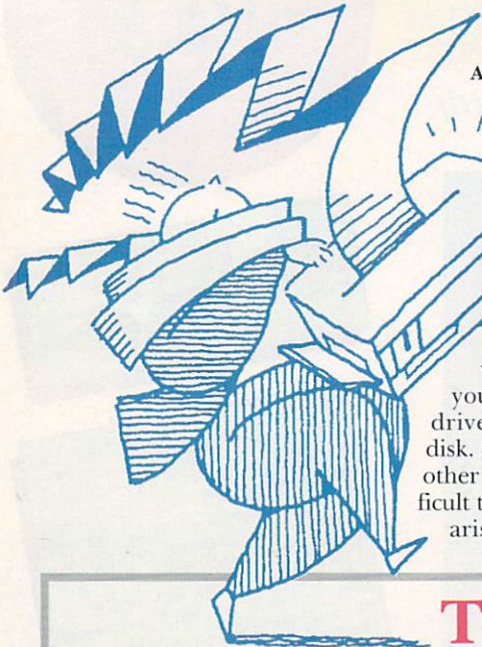
If your problem arises within the warranty period (one year for computers purchased after February, 1991), be sure to bring your dated sales receipt when you bring your computer in, and also mention that this is a warranty repair. All authorized Amiga dealers are required to offer warranty repair service, so you should be able to simply bring the computer back where you bought it.

If you purchased your computer by mail order, however, it is possible that you were not dealing with an authorized dealer; Commodore's stated position is that this disqualifies you from warranty service. How can you tell who is authorized and who isn't? When in doubt, call Commodore and ask. Also, before buying a system, keep in mind that one way vendors are able to offer a low price is by not providing warranty service.

If you are denied warranty service because you unwittingly purchased your computer from an unauthorized source, or if you have a recurring problem that has not been resolved to your satisfaction, you might try complaining to Commodore's Customer Satisfaction department. If you can make a good enough case, you may get extended warranty service even if you technically do not qualify under the rules.

As stated in the main article, Commodore's official position is that if you open the case of your computer for any reason—even to install a Commodore-brand expansion board—you void your warranty. As a practical matter, however, as long as you do not do any obvious physical damage when you add an expansion board, you probably will not be penalized. To be safe, however, it might be wise to ask your dealer to install the board for you, or to at least assure you that your warranty will be honored later on if you install it yourself. □

—SL



Software: Simplify and Experiment

Hardware problems are usually easy to identify because they affect any program that uses the hardware in question. A broken printer port will not print no matter which word-processing program you use, and a broken disk drive will not work with any disk. Software problems, on the other hand, are often more difficult to isolate, because they can arise from interactions with other programs, a particular version of the operating system, or a specific hardware configuration.

Memory problems are a good example of the interaction between hardware and software. If too much of your memory is being used by other tasks, you may not have enough left over for the new program you are trying to run. As a result, some features of the program may not work correctly, it may fail to load, or, if it does load, it may crash as soon as it tries to use more memory than is available.

The *type* of memory can be just as important as the amount. A program that requires a lot of chip memory, such as Professional Page or Pro Video Post, may not be able to start up if there are too many windows open on the Workbench screen—even if you have plenty of fast memory available. If the graphics in a particular program do not display properly, or if the sound effects and music fail to play, the program may be storing its data in fast memory, instead of in chip memory, where ►

The Dirty Half-Dozen

ALTHOUGH THERE ARE lots of different ways for a computer to malfunction, certain problems tend to crop up over and over again. Here are some of the most common problems that you can probably fix yourself:

1\. SYMPTOM: *An A2000HD will not boot to the Workbench screen, but instead stops at a blue CLI text screen with an error message.*

CAUSE: One of the programs that is usually accessed during the startup process has been erased from the hard drive or moved to a location where the system cannot find it. SYS:SYSTEM/FASTMEMFIRST, for example, is a likely suspect because it has an icon and, therefore, can easily be moved accidentally.

SOLUTION: Boot from a Workbench floppy, and drag the FASTMEMFIRST icon from the System drawer on the floppy to the System drawer on the hard drive. Do not ever again move or delete anything from the System drawer.

2\. SYMPTOM: *Games disks keep becoming unreadable. No matter how many times you have your disk drive checked or send away for replacement disks, the games work for a while and then suddenly stop working.*

CAUSE: If your disk drive will not read a disk, it is not necessarily the fault of the drive. Check the disk: It may simply be defective media, or you may be dealing with a heavily copy-protected game that some drives simply will not read. If the same disk keeps going bad, however, you may have a virus.

SOLUTION: Check your entire disk collection with a program such as VirusX. Throw away that disk of neat European demos you got from your friend.

3\. SYMPTOM: *Your new A1084 monitor will not display anything.*

CAUSE: The A1084 comes with several different cables and more switches than the B&O railroad. To make things even more confusing, A1084 models seem to change every two weeks, and no two ever have the same kinds of connectors and switches. The odds are heavily against setting the right combination for use with the Amiga.

SOLUTION: Make sure that you have plugged the cable that goes to the 23-pin video connector on the Amiga into the "RGB" or "Analog RGB" connector on the monitor. Make sure the "TTL/ANALOG" or "RGB" switch is set in the "ANALOG" position. Make sure that the "RGB/CVBS" switch is set to "RGB." Pray.

4\. SYMPTOM: *Your printer prints something, but not what you want it to print.*

CAUSE: Wrong printer driver or wrong switch settings on printer.

SOLUTION: Install the correct printer driver and set Preferences for that printer. Most of the printer drivers are on the Workbench Extras disk, and you must use the InstallPrinter program in the Utilities drawer of the Workbench disk to move the right driver over to your Workbench. If you cannot find your printer on the list, try the appropriate "Epson" driver—EpsonX for 9-pin printers, EpsonQ for 24-pin. The chances are good that one of these drivers will work with the default settings for your printer.

5\. SYMPTOM: *You cannot download programs with your modem.*

CAUSE: Most new modem users do not understand the vagaries of telecommunications (it ain't easy!).

SOLUTION: Make sure that your terminal program uses the same communications settings as the computer you are calling (most default to 8 bits, no parity, 1 stop bit, and these settings usually work with most computers). When downloading, you must first tell the remote computer to send the data (and what transfer protocol to use), then tell your terminal program to receive the data using that same protocol. If a particular BBS (bulletin board system) offers the option "Send file using Xmodem," for example, you can choose that option, tell the remote computer which file to send, and then, when it indicates that it is starting transmission, select "XModem Download" from your terminal program and specify what name to give the file that you receive. Because many files are compressed to save transmission time, most likely you will also need to learn how to use an "archiving," or file-decompression, program. Ask a veteran telecomm person for help (or consult previous *AmigaWorld* articles, "Pack It In," Aug. '90, p. 46, and "The Squeeze Play," May '89, p. 41).

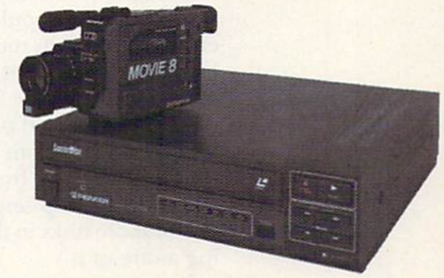
6\. SYMPTOM: *A new memory board crashes the system or does not add the right amount of memory.*

CAUSE: Most memory boards require some configuration of jumpers, and, in some cases, additional chips.

SOLUTION: If you have added the chips yourself, make sure that they are the same type as the chips already present in your system and that they are the same speed and facing in the same direction (all of the little notches in the chips generally must face the same way). Make sure that all of the legs on each chip are inserted correctly into the socket. Check the instructions to find which sockets to use first, and then set the jumpers on the board to reflect the amount of memory you have added. □ *—SL*

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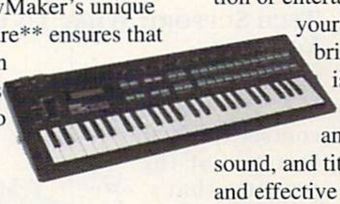
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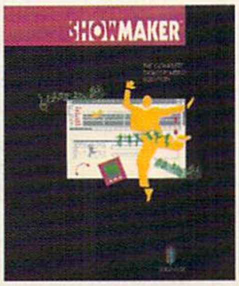
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the sound and graphics chips can get at it. Running the NoFastMem program from the System drawer of your Workbench disk before running such programs may solve the problem.

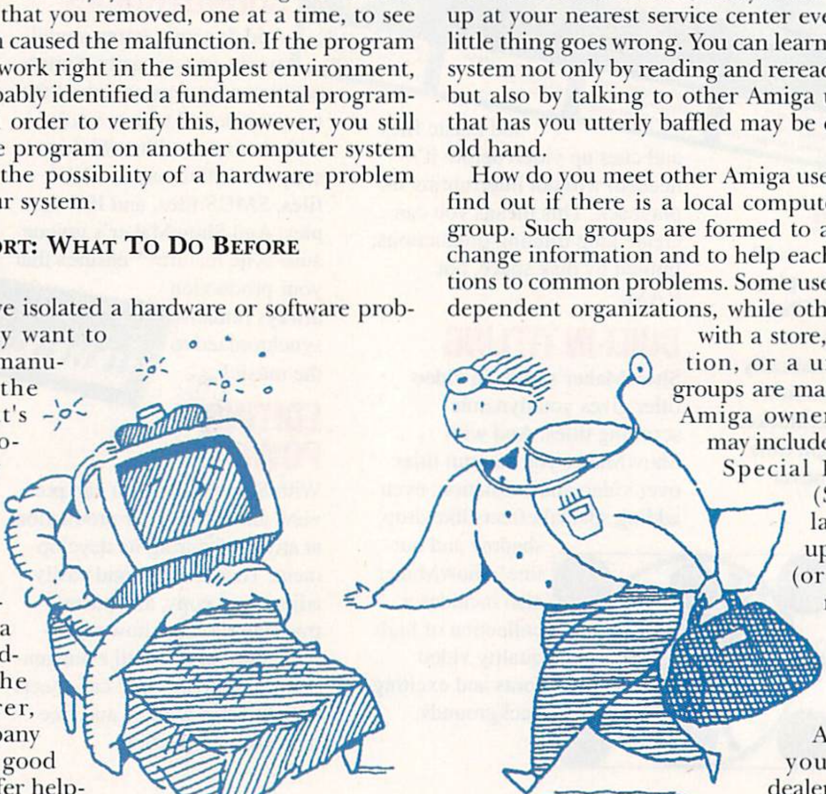
Because of the many possible interactions between programs, you should try to simplify your operating environment to its most basic level whenever a software error crops up. That means you should run the program by itself as the first task that runs when you turn on the computer. If possible, turn the machine off and reboot directly from a copy of the original program disk. (If you boot from another disk, or from a hard drive, the startup-sequence file may automatically run one or more tasks in the background—without your being aware of it.)

If you are using an accelerator board with an advanced processor, run the program using the native 68000 processor—unless the board does not allow you to do so. If you have additional disk drives or hard drives, you may want to disable them, as each drive uses up a certain amount of memory for transfer buffers.

Use a small project file rather than a large one. If you are having trouble with some operation on your word-processing program, try creating a one-page document, rather than loading a 200-page file. If simplifying your operating environment causes the program to work correctly, you can then begin to add in the elements that you removed, one at a time, to see which of them caused the malfunction. If the program still does not work right in the simplest environment, you have probably identified a fundamental programming flaw. In order to verify this, however, you still should try the program on another computer system to eliminate the possibility of a hardware problem unique to your system.

TECH SUPPORT: WHAT TO DO BEFORE YOU DIAL

Once you have isolated a hardware or software problem, you may want to contact the manufacturer of the product that's involved. Nobody is likely to have any more experience with the problems that frequently plague a particular product than the manufacturer, and the company is often in a good position to offer helpful advice. Before you make that phone call, however, jot down the details of the problem so you can better help the technical-support people to diagnose your problem. Be ready to tell them your hardware configuration (computer type, amount of memory, number of disk drives, and so on) and the simplest method of demonstrating the problem.



Don't forget to check the *version* of the particular board or software you are using. Hardware revision numbers are often found on little stickers on circuit boards or on the IC chips. Software version numbers can usually be found in the "About" item of the "Project" menu. If there is no version number, you should be able to check the date of the program file on the original distribution disk, using the CLI's INFO command. It is important to let the manufacturer know what version you are using, because there may be a newer revision available that corrects your problem.

The store from which you purchased your equipment also can often provide technical support over the phone. If your problem is a common one, your dealer may have received information from the manufacturer on how to perform a quick fix. Even if he can't fix the problem on the spot, he may be able to intercede on your behalf with the manufacturer to obtain a speedier resolution.

USERS' GROUPS: YOUR SAFETY NET

If you are a beginning computer user, you may not even be able to come up with a list of possible problems, let alone isolate and eliminate items on that list. The raw newcomer is the person most likely to misdiagnose a simple problem as a total system failure, and also the one least able to take corrective measures. This does not mean, however, that you are doomed to lining up at your nearest service center every time the least little thing goes wrong. You can learn more about your system not only by reading and rereading the manuals, but also by talking to other Amiga users. A problem that has you utterly baffled may be child's play to an old hand.

How do you meet other Amiga users? One way is to find out if there is a local computer club or users' group. Such groups are formed to allow users to exchange information and to help each other find solutions to common problems. Some users' groups are independent organizations, while others are affiliated with a store, a large corporation, or a university. Some groups are made up entirely of Amiga owners, while others may include a smaller Amiga Special Interest Group (SIG) within a larger club made up of Commodore (or even nonCommodore) computer owners.

A good place to start your search for other Amiga users is at your local Amiga dealer. Computer clubs are not usually listed in the Yellow Pages, so they depend on dealers to spread the word. Even if your Amiga dealer does not know of a users' group, he may be able to put you in contact with other users. If there is no Amiga dealer nearby, try contacting the nearest software store or even a nonAmiga computer dealer to find out if there ►

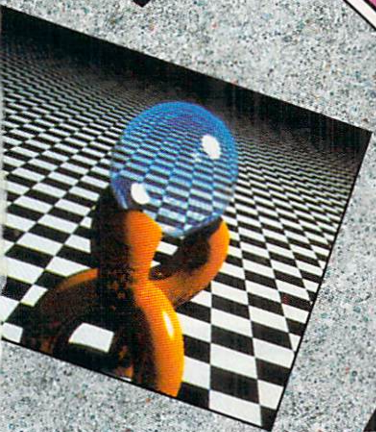


All photographs are of actual DCTV screens.



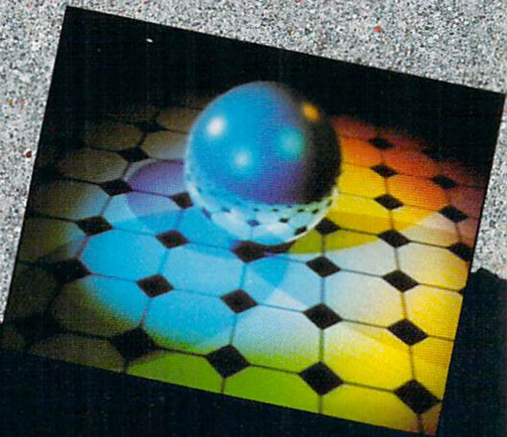


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Once you have identified a problem, should you try to fix it yourself? A major consideration in answering that question is whether your computer is still under warranty. Owners who purchased an A2000- or A3000-series system after February 1, 1991, are eligible for Commodore Gold Service. After sending in an activation form, Gold Service customers are entitled to 24-hour phone support and on-site, next-day repair service. Most new Amiga 500 owners are eligible for the Commodore Express program, under which a Federal Express courier picks up your "sick" computer and returns it the next day (call 1-800/448-9987). With service provisions like these, it hardly pays to fix it yourself, particularly as Commodore stipulates that the simple act of taking the cover off the computer voids your warranty.

Even if your warranty has expired, the main risk in trying to fix it yourself is that you may make the problem worse or add a new one. Generally, it is best to try only those procedures that can easily be reversed or the effects of which are not likely to cause problems. A good place to start is simply making sure that all of the chips and boards are making good contact. Removing your expansion boards and firmly reseating them is not likely to do much harm, and it may solve intermittent erratic behavior. Similarly, you can press down on chips to make sure they are firmly plugged into their sockets.

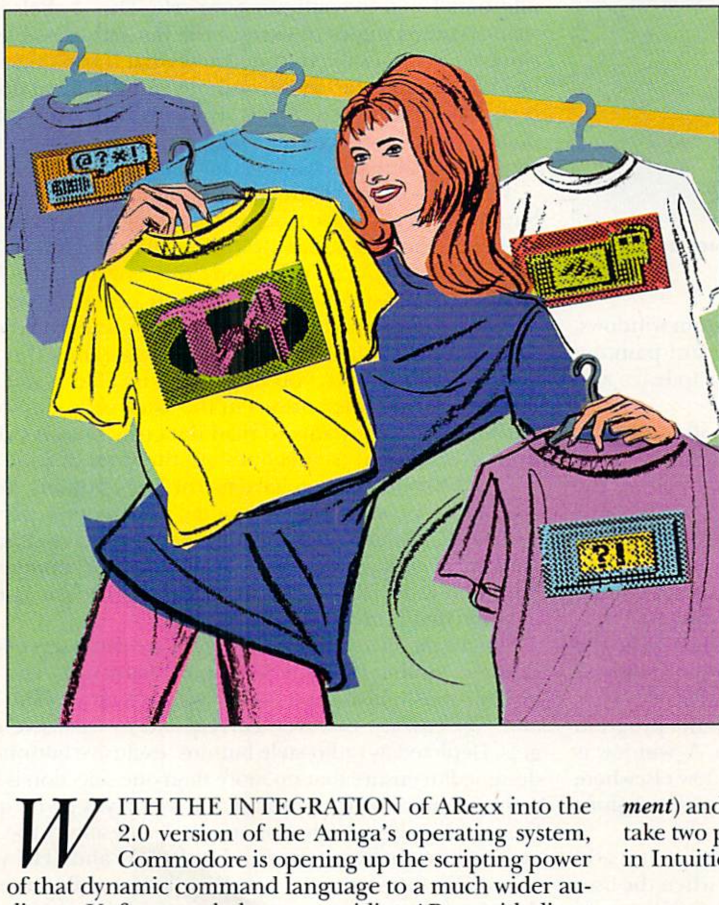
Self-help is also likely to prove harmless when the problem seems to be one of configuration. For example, if your printer can print text correctly, it is a good bet that your printer port, printer cable, and printer are all functioning correctly. Therefore, if you are unable to print graphics, the problem probably derives from your Preferences settings; experimenting with these settings is certainly worth a try.

When trying to cope with a malfunctioning computer, your most important assets are patience and methodical examination of the problem. The steps outlined above can help you identify the nature of your computer problems and their possible causes. Armed with this kind of information, you may be able to fix the problem yourself—or at least work around it. If not, good troubleshooting practices will still enable you to provide the technician or support person with the kind of specific information he or she needs to help you solve your problem. ■

Sheldon Leemon is the author of Inside Amiga Graphics *and co-author of* The AmigaDOS Reference Guide. *He is also technical consultant to an Amiga dealership called "Slipped Disk" in the Detroit area, where a steady stream of ill and injured Amigas passes under his purview each day. Write to him c/o* AmigaWorld *Editorial, 80 Elm St., Peterborough, NH 03458.*

Dressing Up ARexx

With the right tools and a few pointers, you can dress up your ARexx scripts—Intuition style—with the kind of interface accessories Amiga users have come to expect.



By Dave Johnson

WITH THE INTEGRATION of ARexx into the 2.0 version of the Amiga's operating system, Commodore is opening up the scripting power of that dynamic command language to a much wider audience. Unfortunately, by not providing ARexx with direct access to the Amiga's Intuition, the company prevented users from packaging their ARexx programs with the elegant GUIs (graphical user interface) that characterize most other Amiga programs. Without such access, you cannot write ARexx scripts that use windows, gadgets, file requesters, or any other neat Workbench tools.

Or can you? At least two successful commercial products have filled the gap between ARexx and Workbench, allowing you to create professional-looking programs with a complete GUI. Using **RxTools** ($54.95, ***TTR Development***) and **CanDo** ($149.95, ***INOVAtronics***), we will undertake two projects that provide ways to dress ARexx scripts in Intuition clothing.

Project One: Scripting a "Sweater"

The first project is based on an ARexx script that performs automated rubthru operations in Digi-Paint 3 (NewTek). The script, as I have presented it in Figure 3, loads an image into NewTek's Digi-View software (which comes with the digitizing hardware), where the palette is locked, and then exports the image directly to Digi-Paint's spare page. It then loads a second image into Digi-View, adjusting its palette to match the original graphic. The script exports this new image to Digi-Paint, sets up the ►

desired rubthru parameters, and performs the operation—saving the composite image as Ram:Rubthru.

In using this script in the past, I had to enter all the parameters into a Shell window as the script ran. This project, which uses RxTools, replaces that Shell-driven script with a slick Workbench window sporting gadgets and a file requester. (For a complete review of RxTools, see Oct. '91, p. 102.) RxTools supplements the ARexx

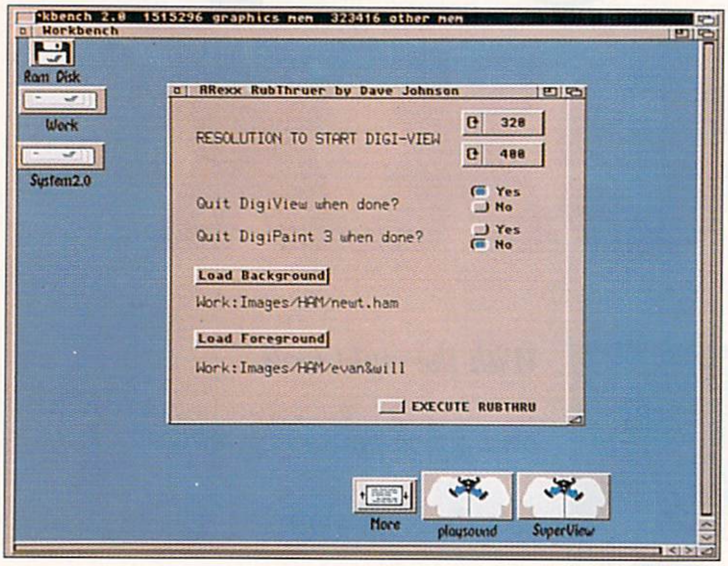


Figure 1. A screen shot showing the Rubthruer interface—built with ARexx and RxTools.

command set with dozens of GUI tools: custom windows, buttons, text entry strings, file requesters, and painting tools. A logical extension of ARexx, it is easy to learn and implement.

We begin our project, as I like to do, not with the actual guts of the script (the part that actually does something useful), but rather with the procedures for building the interface. Refer to the lettered subsections, or "blocks," in the complete Rubthruer script in Figure 3 as we walk through its construction.

The first step is to begin the script with the two lines in the block labeled "A," a required entry in any RxTools-enhanced program. (If you are not familiar with the ARexx Interpret command, don't worry about what these lines do; they merely load data that RxTools needs.) Next, in logical fashion, open the window in which the program appears. "B" provides all the required data. A_window is the name by which we will reference the window elsewhere in the script. The parameters, such as window dimensions and title-bar text, are fairly intuitive.

At this point, go to the very end of the script and add the code responsible for closing the window when the user elects to exit (block "C"). This CLOSEWINDOW procedure ensures that your program will end gracefully. Once you have completed block "C," you can play around and get a feel for the script: run it, watch the window open, exiting through the Close Window box. You can then build the rest of the script interactively, alternately entering the code in a text editor and testing it immediately on the Workbench screen. In this way, you can easily see the positioning of various graphical items and text and make any necessary adjustments right away.

The next logical step is to add buttons and other gadgets to the window. Only after doing this will we actually give those gadgets something to do. The procedure for adding a button in RxTools is similar to that for adding any kind of gadget. Using the "D" block of code, we first name and create the button using the appropriate _Send command. In many cases, you must use the _Set_Bounding_Box command to define its physical size, and then activate it with one of the many variations of _Active (there is a unique _Active command for every type of gadget). The final step, in all cases, is _Create_Gadget, which points the script to a procedure routine that is executed whenever the button is pressed. We'll leave the procedures for now and concentrate on the buttons themselves.

Button, Button, Who's Got the Button(s)?

RxTools supports a variety of button types. I picked cycling gadgets to let the user choose the appropriate resolution for starting Digi-View. Workbench 2.0 supports buttons that cycle to change their value each time the user clicks on them, and RxTools allows you to use them under Workbench 2.0, as well. These cycle gadgets require an additional step to configure properly. The _Labels command assigns values to each of the button's possible positions. How does the routine know what those values will be? Well, we need to tell it, and the easiest way to do this is via a routine such as block "E." This loop reads ASCII data—stored in a comment block such as "F"—and assigns each value to a variable for use later in the script.

The nifty thing about this technique is its flexibility. Suppose that you have a button that toggles between YES and NO, and you suddenly realize the need for a third position, PERHAPS. To remedy this, merely add PERHAPS to the list of data, inserting it between NO and DONE. There is no other code to fix or lines to adjust.

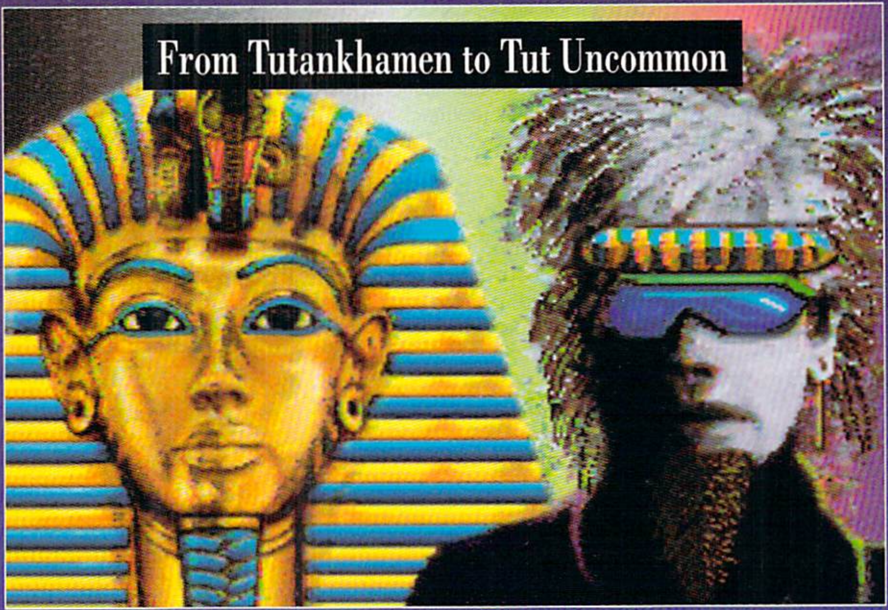
Although you do not need to understand how this particular routine works, you do need to be able to adjust it if you have multiple buttons in the same script, as we do here. The routine wants to read data (the button values) from sourceline(i) (sourcelines are the lines of code in a script). Therefore, if you have two or more buttons, assign the labels for each button sequentially, each one separated by DONE. Then adjust the follow-on button routines to read sourceline(i+n), where n denotes the number of lines that must be skipped in order to get to the correct data for that button.

You might have noticed that there are three sets of data in the comment block at the top of this script. The first two, obviously, are keyed to the cycling buttons. The YES and NO entries, however, correspond to exclusive gadgets. Depicted as radio-style buttons, exclusive buttons are designed to ensure that no more than one selection is ever active at once. We can thus ask the user a yes-or-no question, so that the selection of one choice deselects the other. Exclusive buttons, used in blocks "G" and "H," work essentially the same way as cycling buttons. Because the data for both exclusive-button sets is identical, we need to use only one set of yes-no data to load the variables for both buttons in block "I."

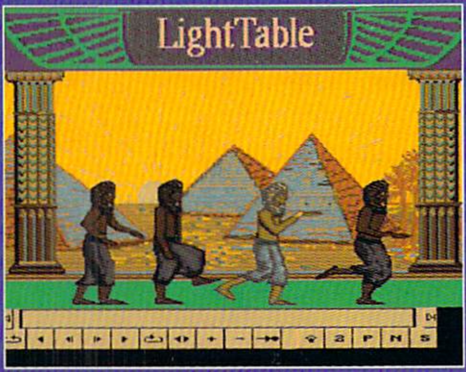
As you can see from the script, each button is created in a similar manner. To build this project, I simply cut the routine for each kind of button from the demo script that came with RxTools. If you do the same, you will save a great deal of time. Change the name of your button to something descriptive of your program, modify the _Set_Bounding_Box dimensions (and perhaps also the _Gadget_Text) to put the button where you want it. ►

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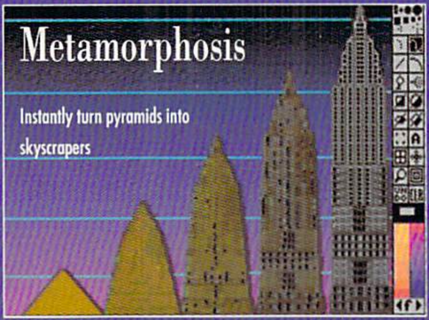
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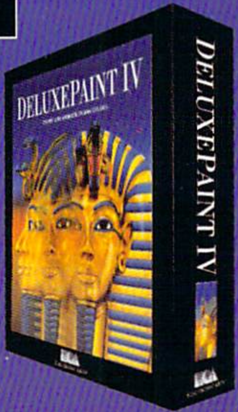
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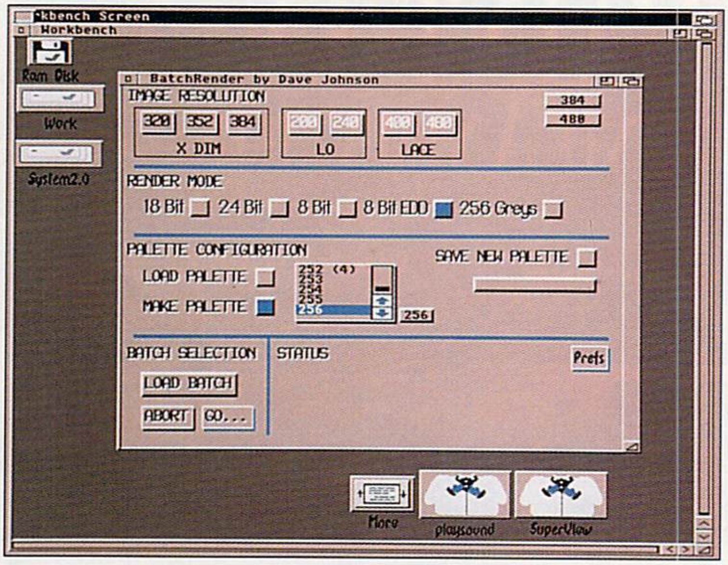


Figure 2. The utility BatchRender (screen above) was created using ARexx and CanDo.

Make Those Gadgets Sing!

Once you have added all the buttons, the next line, "J," actually makes those gadgets visible on the window. It is also a good idea to add text to some gadgets to describe them. The cycle and exclusive buttons need some sort of label, whereas the simple buttons (load foreground and background) have their purposes specified directly by the gadgets themselves. The easiest way to add text to a window is via the _Put_String command, which types a line of text directly to the window. Used in conjunction with _Move_Cursor_To_XY_Position and _Make_Cursor_Invisible, I was able to line the text up with the relevant buttons in block "K."

You may remember that we assigned a procedure to each button via the _Create_Gadget command, but never actually defined that routine. If you click on a gadget before defining the routine, the button will not know what to do, and the script will abort. Many of the procedures are already done, and you can copy them wholesale right out of the applicable demo script. For our purposes, only three procedures must be changed. The buttons that load foreground and background images need to bring up a file requester, which is easily accomplished with the code in block "L." Note that we also print the selected filename on the window as feedback to the user via the _Put_String command. The code for the foreground image button is nearly identical.

The "M" block, activated by the checkbox button, is the real meat of the script. The code is essentially the pre-GUI script, modified to accept data from the requesters. It is worth noting here how Digi-Paint 3 commands are handled. It seems that Digi-Paint 3 has a somewhat fragile ARexx port and that RxTools can break it. I got around this by going through a back door; that is, by using Digi-Paint's HEY command. Issuing commands through the AmigaDOS port (Command), I sent the necessary ARexx commands to HEY, which processed them as ARexx would have. ►

Figure 3. RxTools-Enhanced ARexx Script for Digi-Paint 3 Automatic Rubthru Operations.

```
/*  Data for cycle & exclusive buttons
200
240
400
480
DONE
320
384
DONE
Yes
No
DONE
*/
```
F

```
/*  Default Values for buttons */

xval = 320
yval = 400
pq= "No"||'0A'x
vq= "Yes"||'0A'x

/*  These do-while loops assign values to the buttons later in the script  */
/* Height of DigiView image */

y_labels = ''
do i = 2 while sourceline(i) ~= 'DONE'
    j=i-2
    y_names.j = sourceline(i)
    y_labels = y_labels || sourceline(i) || '0A'x
end
```
E

```
/* Width of DigiView image */

x_labels = ''
do i = 2 while sourceline(i+5) ~= 'DONE'
    j=i-2
    x_names.j = sourceline(i+5)
    x_labels = x_labels || sourceline(i+5) || '0A'x
end

/* Exclusive button Yes-No data  */

Q_labels = ''
do i = 2 while sourceline(i+8) ~= 'DONE'
    j=i-2
    Q_names.j = sourceline(i+8)
    Q_labels = Q_labels || sourceline(i+8) || '0A'x
end
```
I

```
/*  Gotta have this thing... */

rx_tools_init = getclip( 'rx_tools_init' )
interpret rx_tools_init
```
A

```
/* open the window */

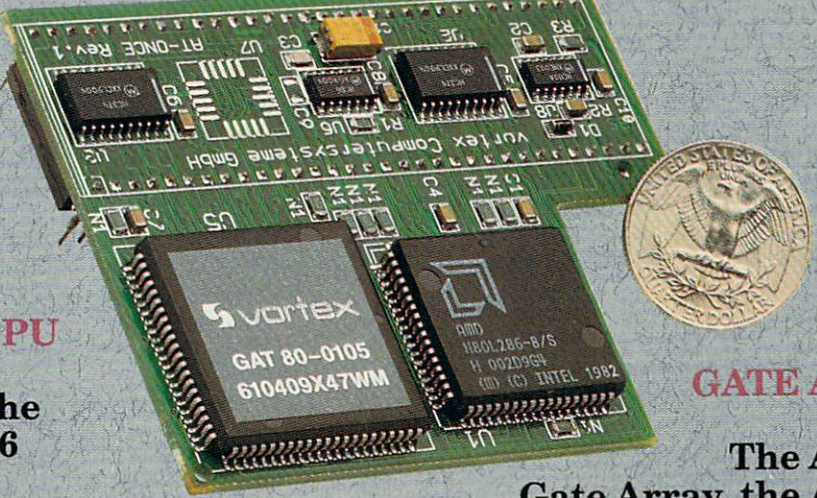
a_window = _send( 'rx_console', _OPEN, 50, 30, 400, 270,
        "ARexx Rubthruer by Dave Johnson", my_port )
```
B

```
/* 2 cycling gadgets for setting resolution */
/* X Dimensions */
```
►

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One final consideration is that if you want to run your new ARexx utility from the Workbench, select the Information menu item on the Workbench screen for this program's icon and add "RX" to the icon's default tool string. It will now run properly when you double-click on the icon. No more Shell windows!

Project Two: Dressing ARexx Without a Script

RxTools' main advantages lie in its linear format; you add windows and buttons to a normal script that you can easily flowchart and troubleshoot. If you are familiar with ARexx, RxTools is little more than an extension of that language. The next project, though, uses CanDo as its GUI driver.

CanDo's advantages stem largely from its design-mode interface, which allows you to add buttons, windows, and other gadgets by selecting, drawing, or dragging with the mouse. CanDo requires no commands to implement its graphical interface, so you need not be conversant with ARexx to try out CanDo. Once you have created your buttons, you can "attach" action scripts directly to those objects. Because of this, CanDo projects are not linear, and they can be trickier to troubleshoot than traditional scripts.

Figure 2 shows BatchRender, an ARexx utility I built ►

```
mx_gadget = _send( 'gt_cycle', _NEW, a_window )
call send mx_gadget, _SET_BOUNDING_BOX, 280, 20, 80, 20
call send mx_gadget, '_GTCY_Labels', x_labels                    D
call send mx_gadget, '_GTCY_Active', 0
call send mx_gadget, _CREATE_GADGET, echox

/* Y Dimensions */

my_gadget = _send( 'gt_cycle', _NEW, a_window )
call send my_gadget, _SET_BOUNDING_BOX, 280, 45, 80, 20
call send my_gadget, '_GTCY_Labels', y_labels
call send my_gadget, '_GTCY_Active', 2
call send my_gadget, _CREATE_GADGET, echoy

/* Exclusive Buttons */
/* DigiView Yes-No Button */

mx_gadget = _send( 'gt_mx', _NEW, a_window )
call send mx_gadget, _SET_BOUNDING_BOX, 290, 80
call send mx_gadget, _PLACETEXT_RIGHT
call send mx_gadget, '_GTMX_Labels', Q_labels                    G
call send mx_gadget, '_GTMX_Active', 0
call send mx_gadget, '_GTMX_Spacing', 4
call send mx_gadget, _CREATE_GADGET, echo_exv

/* DigiPaint 3 Yes-No Button */

mx_gadget = _send( 'gt_mx', _NEW, a_window )
call send mx_gadget, _SET_BOUNDING_BOX, 290, 110
call send mx_gadget, _PLACETEXT_RIGHT
call send mx_gadget, '_GTMX_Labels', Q_labels                    H
call send mx_gadget, '_GTMX_Active', 1
call send mx_gadget, '_GTMX_Spacing', 4
call send mx_gadget, _CREATE_GADGET, echo_exp

/* Simple Buttons */
/* Load Background Image */

Back_button = _send( 'gt_button', _NEW, a_window )
call send Back_button, _PLACETEXT_IN
call send Back_button, _SET_BOUNDING_BOX, 25, 145
call send Back_button, _SET_GADGET_TEXT, 'Load Background'
call send Back_button, _CREATE_GADGET, LoadBack

/* Load Foreground Image */

Fore_button = _send( 'gt_button', _NEW, a_window )
call send Fore_button, _PLACETEXT_IN
call send Fore_button, _SET_BOUNDING_BOX, 25, 195
call send Fore_button, _SET_GADGET_TEXT, 'Load Foreground'
call send Fore_button, _CREATE_GADGET, LoadFore

/* Checkbox for starting execution of script */

go_checkbox = _send( 'gt_checkbox', _NEW, a_window )
call send go_checkbox, _SET_BOUNDING_BOX, 200,250
call send go_checkbox, _SET_GADGET_TEXT, Execute Rubthru
call send go_checkbox, _PLACETEXT_RIGHT
call send go_checkbox, _CREATE_GADGET, GO

/* This actually puts buttons on window — you only need one of these */

call send a_window, _POST_GT_GADGETS                              J

/* Print some Text */

call send a_window, _MOVE_CURSOR_TO_XY_POSITION, 4, 3
call send a_window, _PUT_STRING, "RESOLUTION TO START DIGI-VIEW"
call send a_window, _MOVE_CURSOR_TO_XY_POSITION, 4, 7
call send a_window, _PUT_STRING, "Quit DigiView when done?"
call send a_window, _MOVE_CURSOR_TO_XY_POSITION, 4, 9
call send a_window, _PUT_STRING, "Quit DigiPaint 3 when done?"   K
call send a_window, _MAKE_CURSOR_INVISIBLE

/* Gotta have this, too — whenever there are user-interaction routines */

event_handler = getclip( 'rx_tools_event_handler' )
interpret event_handler

/* These procedures refer back to buttons we already defined */

ECHOX:
   direction_index = c2d(intui_message.code)
   XVAL = x_names.direction_index
   return

ECHOY:
   direction_index = c2d(intui_message.code)
   YVAL = y_names.direction_index
   return

ECHO_EXV:
   direction_index = c2d(intui_message.code)
   VQ = Q_names.direction_index'0A'x
   return

ECHO_EXP:
   direction_index = c2d(intui_message.code)
   PQ = Q_names.direction_index'0A'x
   return
```
►

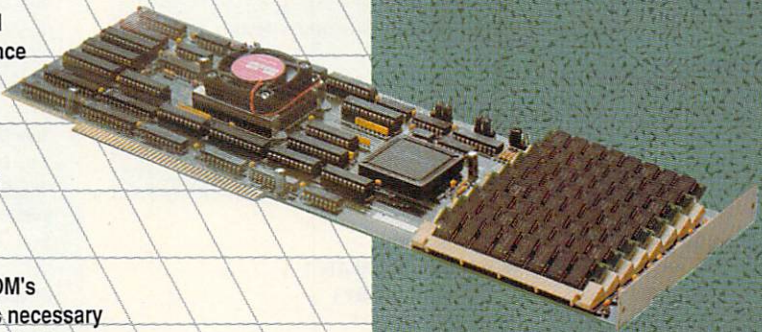
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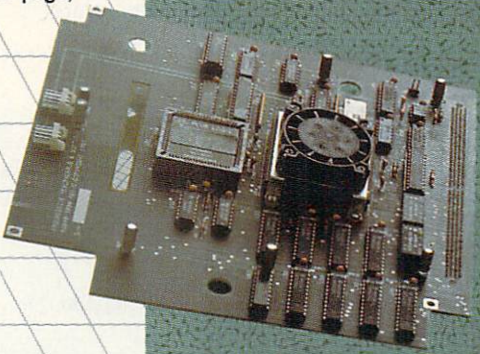
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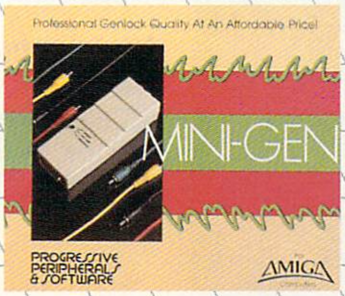
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with CanDo. It takes batches of 24-bit images and converts them to HAM-E (Black Belt Systems) format, ready to be incorporated into an animation using the ARexx port in Black Belt's Image Professional (IP) software. In this way, you can build 24-bit animations in programs such as Imagine (Impulse) and then display them in near-24-bit format using the HAM-E hardware. This little program is another good example of how you can make a slick ARexx-driven utility that interacts with one or more other programs, all controlled from a Workbench window. Because of the nature of CanDo's design environment, I cannot provide a script for this utility here. Instead, I will tell you how to do it yourself.

As with the last project, the easiest way to build this program is simply by creating a do-nothing interface. Press the Window gadget on CanDo's control panel and add the relevant information in the appropriate requesters. Tell CanDo to open the window on Workbench and set the window dimensions. Finally, add text and buttons with the appropriate gadgets on the CanDo control panel.

BUTTON-DOWN VERSATILITY

CanDo allows buttons to perform different actions depending on whether the user presses and holds the mouse button, clicks it once, double-clicks it, or drags it. For each ►

L

```
LOADBACK:
  a_file_req = _send( 'file_requester', _CREATE )
  Back_file_name = send( a_file_req, _POST )
  call send a_file_req, _FREE

  /* Prints Background image filename after user selects it */

  call send a_window, _MOVE_CURSOR_TO_XY_POSITION, 4, 13
  call send a_window, _PUT_STRING, Back_file_name
  call send a_window, _MAKE_CURSOR_INVISIBLE

  RETURN

LOADFORE:
  a_file_req = _send( 'file_requester', _CREATE )
  Fore_file_name = send( a_file_req, _POST )
  call send a_file_req, _FREE

  /* Prints Foreground image filename after user selects it */

  call send a_window, _MOVE_CURSOR_TO_XY_POSITION, 4, 17
  call send a_window, _PUT_STRING, Fore_file_name
  call send a_window, _MAKE_CURSOR_INVISIBLE

  RETURN
```

M

```
GO:
  /*
  This is really the meat of the script. It a subset of the actual
  ARexx script I had around before ARexx Tools came along.
  */

  Address Command
  'run work:paint/digiview/dv '||XVAL||' '||YVAL||' c'
  'wait 2'

  Address 'Digi-View'
  'Liff '||back_file_name
  'Frez'
  'Pant'

  Address Command
  'wait 10'
  'hey DigiPaint Cpic'

  Address 'Digi-View'
  'Liff '||Fore_file_name
  'Pant'

  Address Command
  'wait 10'
  'hey DigiPaint Hvar'
  'hey DigiPaint Mide'
  'hey DigiPaint Rubt'
  'hey DigiPaint Whsc'

  /* Save Image */

  'hey DigiPaint Save'
  'hey DigiPaint FnamRubthru'
  'hey DigiPaint DnamRam:'
  'hey DigiPaint Okls'
  'wait 5'

  /* Exit from Digi-View and DigiPaint if desired */

  nv = delstr(VQ,2)
  np = delstr(PQ,2)

  Address 'Digi-View'
  If nv = "Y" then
  'Quit'
  else
  Nop

  Address Command
  If np = "Y" then
  'hey DigiPaint Quit'
  else
  Nop

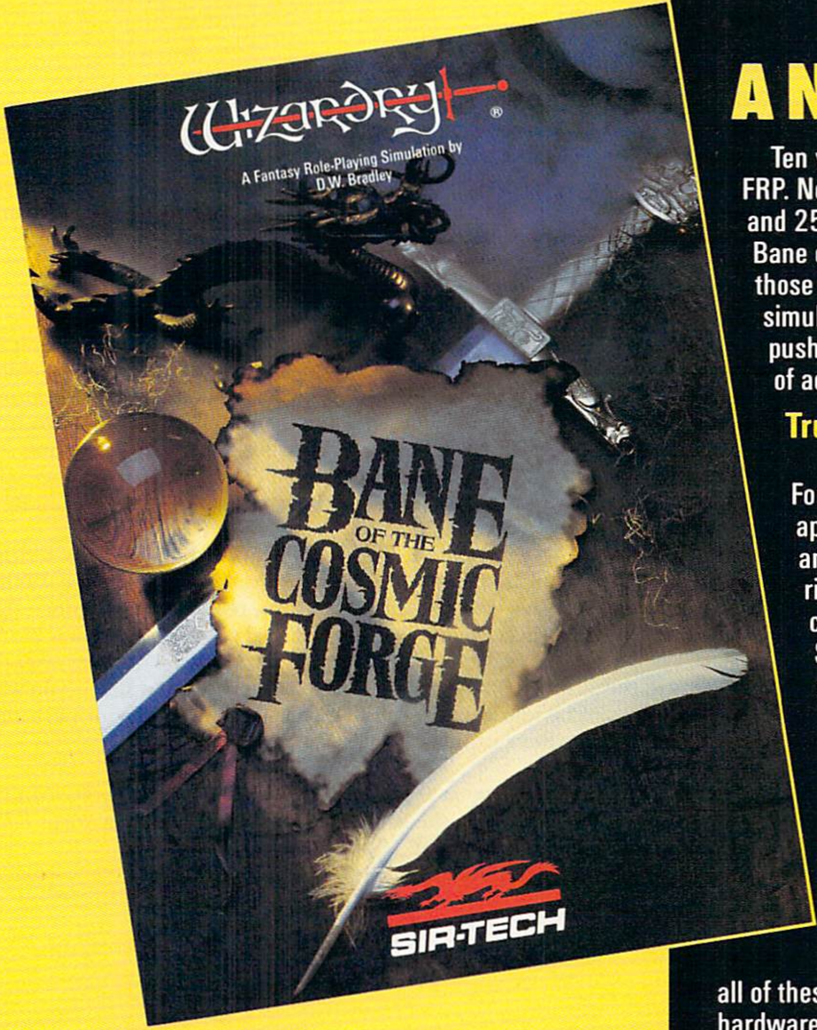
  call send a_window, _MOVE_CURSOR_TO_XY_POSITION, 4, 19
  call send a_window, _PUT_STRING, 'Done'
  call send a_window, _MAKE_CURSOR_INVISIBLE

  RETURN

/* And we always finish things up with this... */
/* Add it right after you create the window so you can play with the script */
```

C

```
CLOSEWINDOW:
  call send a_window, _DELETE
  call reply packet, 0
  exit 0
```



A NEW WIZARDRY

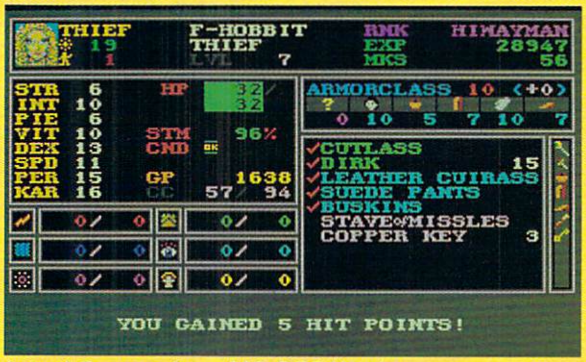
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button you create, add a script for the "release" (single-click) option. In general, all you need to do at this point is add a variables assignment. For instance, if the user clicks on the 24-bit button in the Render Mode zone, you might add a line that says, Let Render="24". For the Image Resolution zone, make assignments such as Let Width="320" and also type the user's selection in the text string at the right with the CanDo command SetWidth "Width_String", Width.

Once you define the parameter-selection gadgets, move on to the "Load Batch" button. This button, assigned the scriptline Let Directory=AskForFileName (User_Default_Directory), produces a file requester that allows the user to select a directory from which to generate a list of 24-bit images. All the files in that directory are loaded into a list from which the user can double-click, placing selected images into the actual render queue. Although this is the most complicated part of the script, it is a procedure that is well documented in many existing CanDo scripts in the public domain. Also, note that we have yet to encounter a single line of ARexx code!

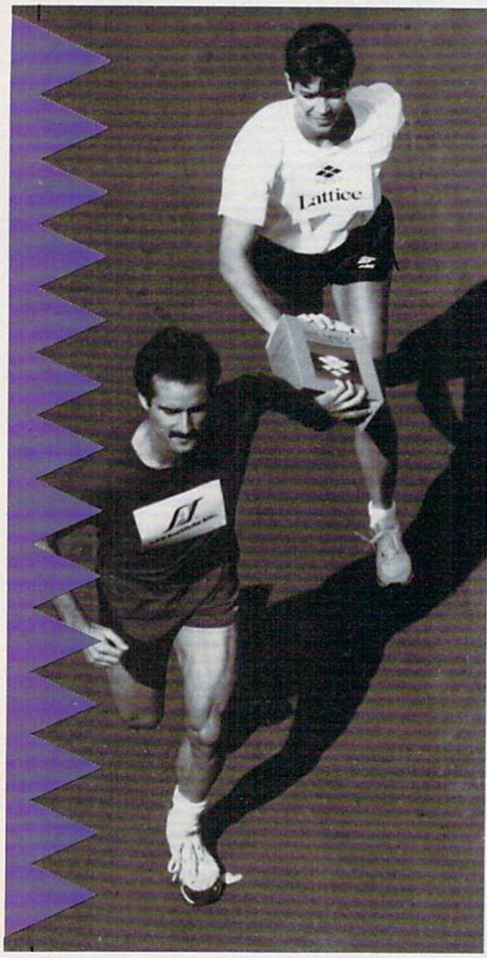
As with the first project, the meat of this code is in the button I have marked GO, and it is here that we finally get to see how CanDo works with ARexx. CanDo supports ARexx through a simple extension of its normal scripting language. To address a particular port, simply type SpeakTo Portname. In our example, we are talking only to one ARexx application, so I put SpeakTo "IP_Port" in the very beginning of the program, in the Before Startup option of the window script. To send an ARexx command, merely send SendMessage "Your Arexx command here." In practice, this command is just as flexible as an ordinary ARexx statement. The key command in the GO routine's loop is:

```
SendMessage “Render “||lace||” “||width||” “||height||”
“||mode||” “||usepalette||” “||name||” “||numcolors
```

demonstrating the use of imbedded variables in a simple ARexx command. In this case, we collect all the variables that were assigned values when the user pressed buttons on the BatchRender screen, and then route them to Image Professional's Render command. They are strung together with the concatenation symbol (found above the backslash, to the left of the backspace key) and separated by blank spaces.

As you can see, it is very easy to enhance ARexx scripts with all of the GUI niceties of commercial software. While mouse interaction and custom requesters were once the exclusive domain of professional programmers, now every ARexx code you write can incorporate all the user-friendliness of the best Amiga software. Give it a shot—you will be impressed with the professional look of your personal ARexx utilities. ■

Dave Johnson is the author of The Desktop Studio: Multimedia with the Amiga. *Write to him c/o* AmigaWorld *Editorial, 80 Elm St., Peterborough, NH 03458.*



Smooth Moves

If your AmigaVision application requires smooth, graceful transitions and effects, try "brushing up" your act.

By David M. Spitler

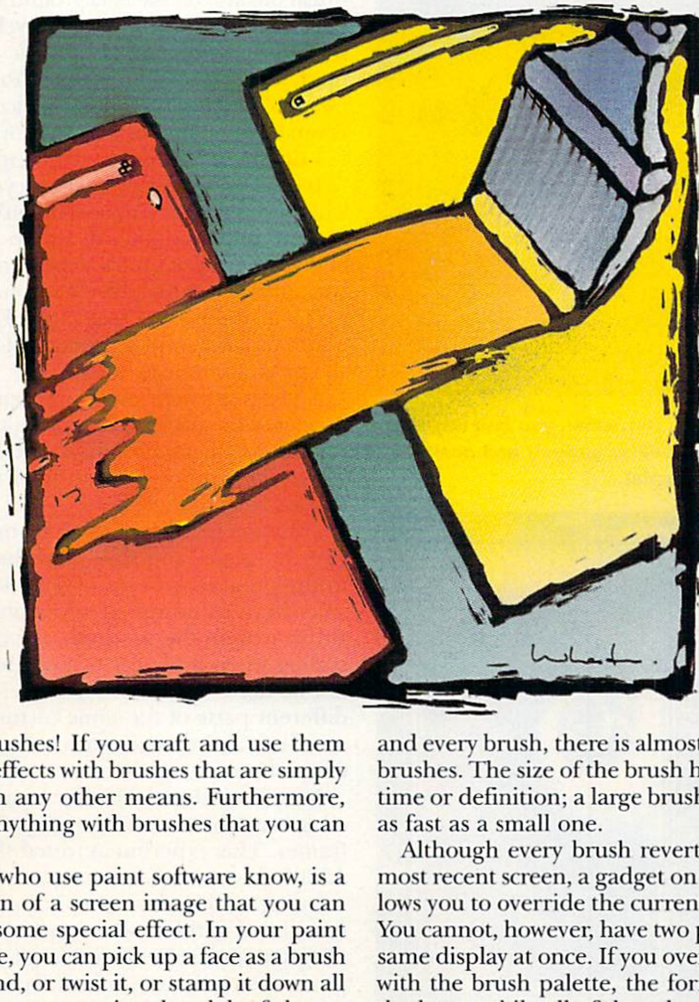


Image 1.Take. Image 2.Take. Image 3. Cut! Unless you have a souped-up machine with lots of memory, the full-screen transitions in your AmigaVision applications are likely to be slow and hesitant. Such abrupt transitions may be fine for slide shows, but they often detract from other kinds of presentations. How can you achieve beautifully smooth moves—polished effects that seem to draw themselves on the screen? With brushes! If you craft and use them well, you can create effects with brushes that are simply not possible through any other means. Furthermore, you can do almost anything with brushes that you can with full pictures.

A brush, as those who use paint software know, is a small or large section of a screen image that you can pick up and use to some special effect. In your paint program, for instance, you can pick up a face as a brush and reverse, flip, bend, or twist it, or stamp it down all over the screen to create an entire glee club of clones. You can pour a brush into or wrap a brush around an object, and even animate it. Finally, you can save brushes for later use or for export to an environment such as AmigaVision.

Understanding how AmigaVision handles brushes begins with an understanding of the Audio-Visual menu at the bottom of the program screen. Of all the graphics-oriented icons in this menu, only the Screen icon can have other icons as children (also, only Audio-Visual icons can be children of the Screen icon). This means that the Screen icon sets up the palette and screen-definition parameters for the other Audio-Visual icons, including the brush.

Each new Screen icon starts with a clean slate, while the other icons are controlled by the most recent Screen icon. Consequently, because the computer does not need to calculate new settings for each and every brush, there is almost no hesitation between brushes. The size of the brush has little to do with load time or definition; a large brush loads and runs nearly as fast as a small one.

Although every brush reverts to the palette of the most recent screen, a gadget on the Brush requester allows you to override the current palette (see Figure 1). You cannot, however, have two palettes in effect on the same display at once. If you override the screen palette with the brush palette, the former changes to match the latter, while all of the other screen parameters remain unaltered.

"Loading" Your Brush

To get the best effects from your brushes, you must prepare them properly in your paint program. If you need a complete section of a picture to cover part of another picture, you must make your brush fit the spot reserved for it by carefully using the coordinates feature in your paint program. In addition, you should match the ►

ILLUSTRATED BY DAN WHEATON

palettes of the brushes to that of the host screen. (You can get some spectacular effects with intentional mismatches, but matched palettes are better for most applications.) Once you have created your brushes, save them, preferably to a Brushes drawer within the directory containing the program code and other special materials for your AmigaVision application.

With the brushes created and stored, it is time to open up AmigaVision and put them to use. You can introduce a brush—with or without its background—at any point in an AmigaVision program. This means you can block out an entire section of a picture with a brush of another picture, or draw a fine white line from one point to another without affecting the rest of the picture. And you can carry out your effects using any of the wipes, fades, and fancy transition options found in AmigaVision's Transitions-requester arsenal.

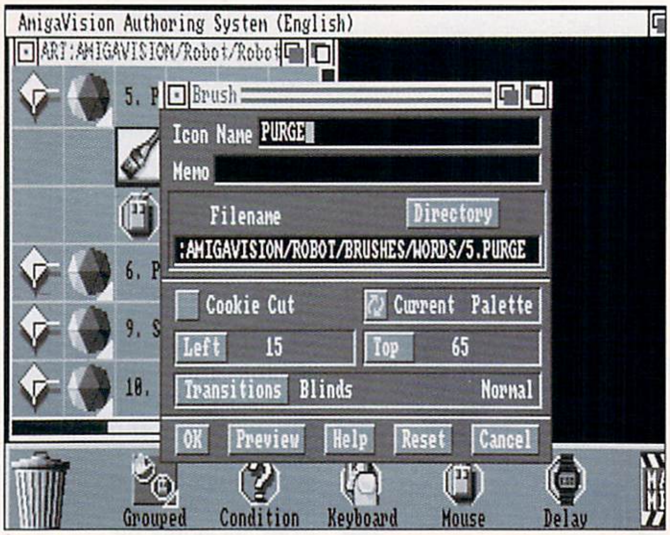


Figure 1. Within AmigaVision's Brush requester, you can override the host palette (using the Current Palette gadget) and position your brush (via the Top and Left gadgets).

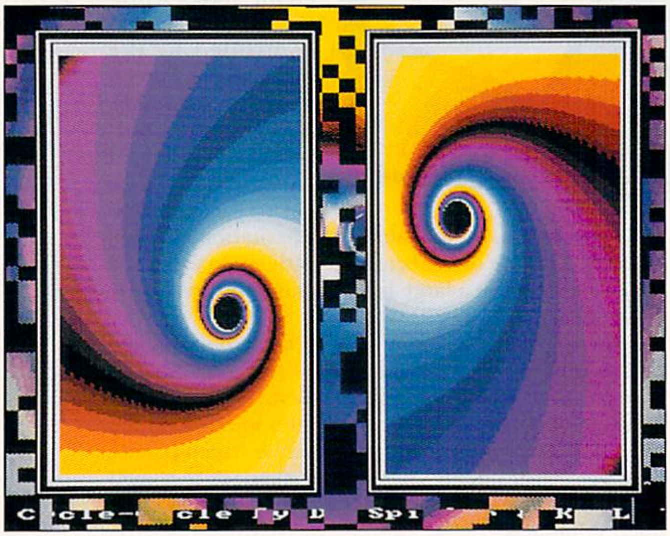


Figure 2. The main screen of the CycleCycle has two framed color-cycling brushes upon a background brush that also cycles.

Before you summon your brush, use a Screen icon to bring up a host picture. Then, placing the brush on screen means using the Brush requester's Left and Top gadgets to orient the upper-left corner of the brush. If you know the screen coordinates you want to use, simply type them in. More likely, though, you will know generally where you want to place the brush, but not know the coordinates. In this case, you must experiment. Double-click the Brush icon to bring up the requester, then click on the Top gadget and type in your best guess. Do the same with the Left gadget. Now click on the Preview gadget to see where you are. By repeating these steps, you can move the brush around until it is exactly where you want it.

You can place the Graphics icon on screen at any time to cause color-cycling brushes and pictures to cycle (cycling is set within your paint software, not AmigaVision). Keep in mind that any colors such a brush shares with its host screen will cycle not only in the brush but also on the background screen. The Graphics Icon requester allows you to cycle both forward and backward and to cycle specific colors—depending upon how you set up the brush. You can string together Graphics icons with Timed Wait icons to start, stop, and reverse the cycling of a picture or brush.

I discovered this more by accident than by design. A friend who had created a cycling picture asked whether I knew how to use AmigaVision to cycle it during the presentation. We set up a quick program to bring the picture up on screen and cycle forward and backward. Then we added a second cycling picture and performed the same magic (see Figure 2). Placing the entire program under the control of a Loop icon made the program repeat.

The results were okay, but pauses between images damaged the program's continuity. The delay was noticeable when going from picture 1 to picture 2, but became even more pronounced when the program looped back to picture 1.

From the pictures, I carefully made brushes in a variety of shapes and sizes, and then tried to use them in the program instead of complete pictures. The results were stunning! If a Graphics icon precedes a Brush icon in the program, the brush will already be cycling when it appears—something that simply cannot be done with a Screen icon. Taking brushes from different parts of the same picture and putting them on screen at the same time creates a completely different picture.

Now I wondered whether I could place a huge cycling brush on the screen with just a cutout for the two frames. This experiment tested the limits of my 3MB A2000, but the effect was great. I continued experimenting, and by dawn I had created a whole raft of effects, filled in titles, added music, and saved the whole program under the name CycleCycle. This entire program uses only two Screen icons; everything else is done with Brush icons, including the titles at the beginning and end. The resulting transitions are so smooth that CycleCycle looks more like a movie than an AmigaVision program.

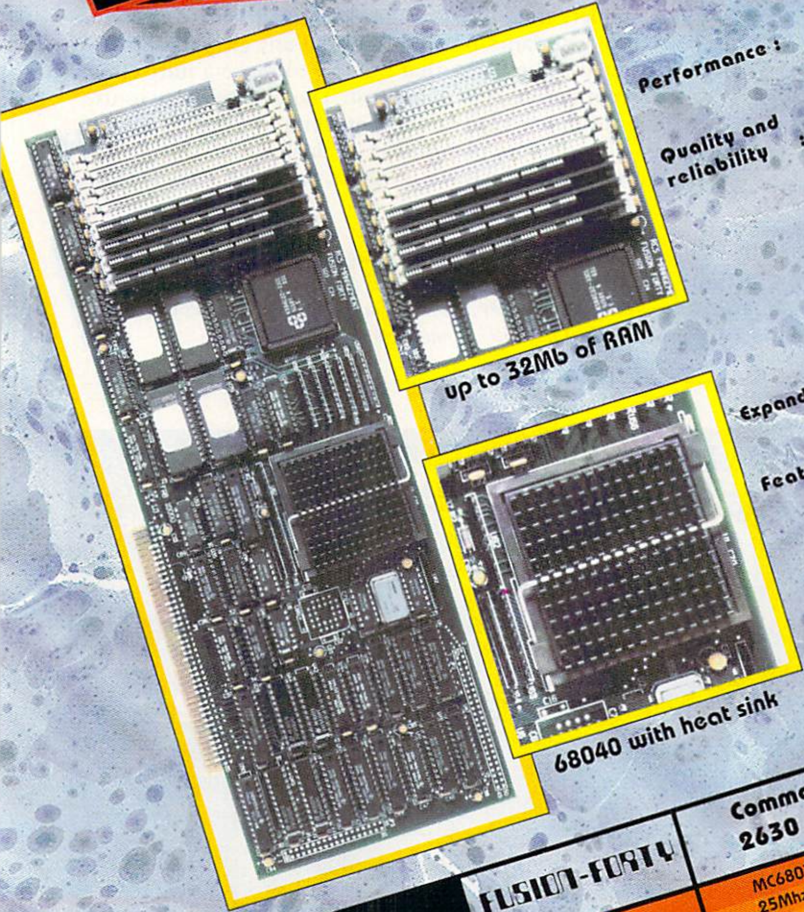
More Smooth Operations

You can put brushes to much less exotic use, as well. You can, for instance, create the illusion that a screen button has been depressed when someone clicks on it. Although you can achieve this effect through hit boxes, ►

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MFLOPS	3.5+	Less than 1	Less than 1	1.
Cache Sizes	4Kbytes x 2	256bytes x 2	256bytes x 2	8kbytes
Burst	Yes	NO	YES (Needs DaughterBoard)	yes
Memory(32bit) on board	4M Standard Max 32 M	2M Standard Max 4 M		

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using the Object Editor is a better way; it lets you create a button that, when activated, is replaced with a brush (see Figure 3).

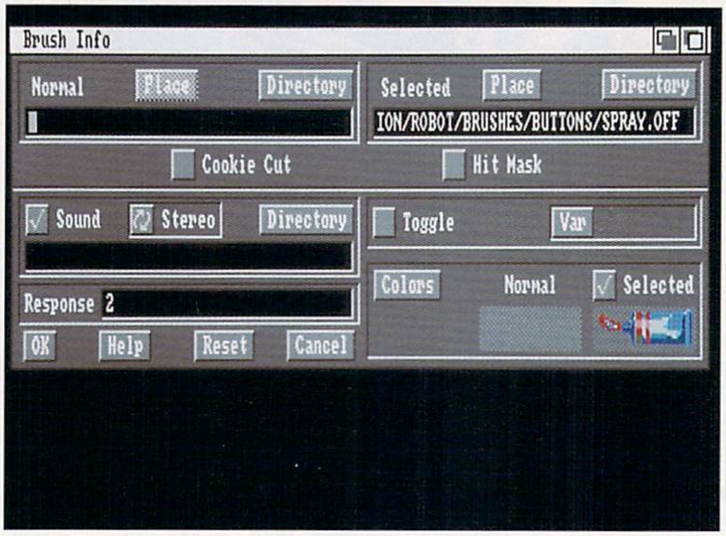


Figure 3. The Object Editor lets you create buttons and gadgets that toggle between two states.

If you want to simulate an instrument panel, you can create the effect of flashing lights by cycling two or more colors, and you can make a temperature or fill gauge seem to increment or decrement by applying a carefully sized color bar with a Wipe Up transition. AmigaVision allows you to do strange and wonderful things with brushes.

Don't let yourself get carried away, though. Because brushes do not reestablish the screen, but rather build on an existing screen, stacking brushes on top of each other can cause some strange effects. You should make full-size screen changes with the Screen icon unless there is a compelling reason to do otherwise. In addition, although individual brushes are memory efficient, whole gangs of them can not only eat up memory, but fragment it so badly that your Amiga can crash when you leave the program.

Lastly, in order to be effective, brushes require more subtlety than other graphics icons. It is easy to fall in love with fancy brush effects, but any graphics professional will tell you that the way to make a nifty effect seem boring is to overuse it. The effective way to use brushes is to plan carefully and employ them sparingly.

Brushes are powerful and valuable tools. If you take the time to use them properly, you are not likely to be disappointed. ■

Dave Spitler, a long-time Amiga user and multimedia specialist, serves commercial and industrial accounts as a multimedia developer and salesperson for Mr. Horan's Computer Lab in Louisville, Kentucky.

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ACCENT ON GRAPHICS

That "Embossed" Look

33

A continuing series of tips, techniques, and tricks for creating more imaginative Amiga graphics.

By Joel Hagen

ONE OF MY favorite image-processing effects transforms a monochromatic image into an embossed version of itself. The image suddenly looks as though it were carved into stone, or pressed into paper. While it is possible to achieve this effect using a number of different programs, I have gotten my best embossing results from Art Department Professional (ASDG). You can also produce the embossing effect successfully in HAM paint programs—such as Digi-Paint 3 (NewTek)—that allow transparent compositing. We'll take a look at techniques for both these programs in this month's column.

To create the illustration accompanying this piece, I first used Digi-View (NewTek) to capture a portrait of model Patrice Saenz in black and white. Working in lo-res interlace mode gave me an initial screen of 320×400 pixels—with the opportunity for later using a full 32-color palette to develop my image more fully.

VERY "PROFESSIONAL" EMBOSSING

With Load and Save set to IFF format, I loaded the portrait into Art Department Professional. I wanted first to reduce the image to solid areas of value rather than the evenly dithered tones of the digitized original. From AD Pro's Image Operators, I selected Median Filter, and then Execute Op. Setting the threshold to 5, I clicked on Accept to execute the operation, which processes the image data but does not display the image. To see the results of the operation, you must click the Execute button at the lower-right corner of the main AD Pro screen. This displays the image in the currently selected Screen Control settings.

Using Median Filter reduces the images to areas of discrete color or value, leaving interesting value planes for each gray area. While it is not necessary to perform Median Filter operations to produce an embossed image, I wanted to create a layered look in the finished illustration. I repeated the Median Filter operation three times to exaggerate the effect, and then saved the new image as a 16-color file.

To achieve the embossed look, I also needed a negative of my picture. With the filtered image still present, I selected Negative from the Image Operators, and then Execute Op. Again, I viewed the result by clicking Execute on the main screen, and then I saved this as a separate image.

To produce the actual embossing effect, I then superimposed the image with its negative at 50% transparency with a slight offset. I loaded the positive image first, then selected Comp (which is next to the Load button). Using Composite mode allows a high degree of control over the way in which two images can be merged.

Setting Mix to 50%, I then loaded the negative version of the image. I wanted the negative to be offset at a diagonal to the original image, so I set both the X and Y offsets in the Source box to 3 and clicked on OK. After the image loaded, I viewed the results by clicking Execute on the main screen. The image had the effect I was looking for: a bas-relief look with highlighted layers that result from the breakup of values during the Median Filter operations.

The image was a little soft, so I decided to enhance the contrast between darks and lights. Under Color Controls, I selected Balancing and moved the Contrast slider up to about 30. I liked the result, and saved the image as a 16-color IFF file.

With the embossing effect now complete in AD Pro, I wanted to work on

With a few simple image-processing techniques, you can give a dramatic embossed look to almost any digitized image.

the image by hand, as well, striving for a look of a carved stone wall. I loaded the image into DeluxePaint III (Electronic Arts) with the screen format set to 32 colors. I changed the gray image to shades of brown by going into the palette and changing black to a dark brown and white to a light brown, and then used Spread to interpolate all the intermediate values. This spread of browns replaced the gray scale, changing all the colors in the image. Still in the Palette window, I set those 16 browns as a Range, which allowed me to use DPaint's Shade and Blend tools on the image.

For the purposes of this particular illustration, I chose to leave the main image area untouched, because the point of this exercise is really the embossing method. I couldn't resist a bit of touch-up, however, to enhance the look of weathered stone, so, using the F5 key to put me in Shade mode, I began putting shadows, highlights, and cracks on the edge of the image. Painting with one mouse button lightens, while the other darkens. Using Blend mode, I then softened the edges of my touch-ups. Everything you see in the face, however, is the result of the embossing technique, not handwork. In this image, I did not make use of the remaining 16 colors in my palette.

HAM Can Do, Too

If you don't use AD Pro, you can still experiment with embossing in your HAM paint program, although the results may not be as clean as those obtained in AD Pro's 24-bit operation environment. The following procedure applies to Digi-Paint. Turn dither off. Load the black-and-white image and then pick up the entire image as a brush, using Filled Rectangle and Scissors. In the Brush menu, select Spare/Copy This Brush. From the Mode menu, select XOR and stamp the brush down precisely over the original image with no offset. XOR mode performs Boolean voodoo on anything under the brush, "exclusive or-ing" the bits that define each pixel. In this case, the result is a clean negative image. Be sure you set the Transparency sliders all the way to the top for this operation.

Now reduce both Transparency sliders to 50% and select Normal mode. Position the full-screen brush at a slight diagonal offset over the negative and stamp it down to produce the finished embossed effect. Using Colorize mode is a great way to add color and bring out the stone look. If you wish, you can enhance the contrast of the image by using Digi-Paint's Transfer 24 image-processing utility. ■

Joel Hagen's credits include work in art, astronomy, science fiction, and software development. Write to him at 10512 Sawyer, Oakdale, CA 95361. Please include a stamped, self-addressed envelope for a reply.



The "Woman in the Wall" illustration demonstrates the effects of applying embossing techniques to a digitized image.

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Impact Vision 24: A First Look

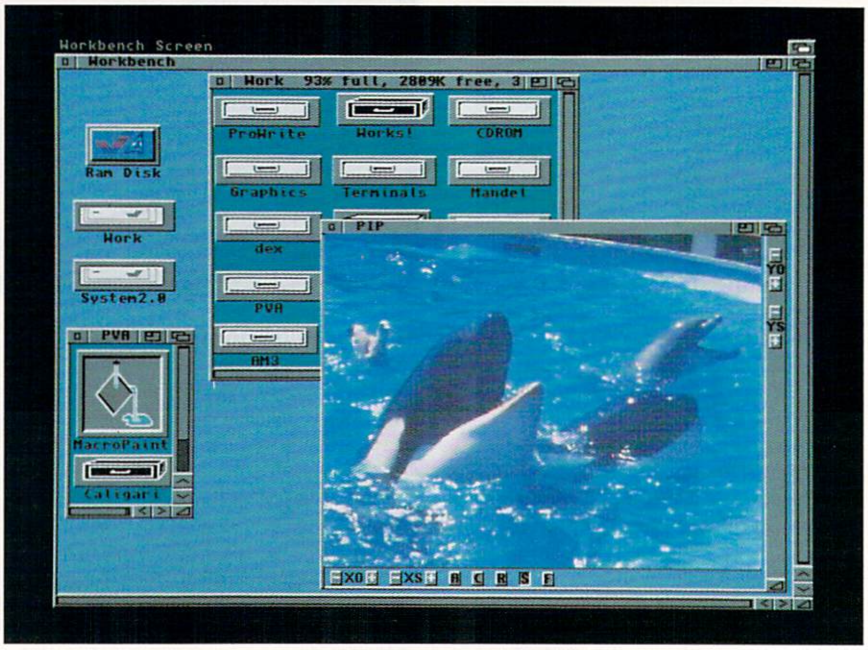
A 24-bit, multifunction, multimedia solution from Great Valley Products.

By Louis R. Wallace

AS IMPRESSIVE AS the Amiga's built-in graphic system is, only 24-bit graphics can offer the power many Amiga users want and need. At the July AmiEXPO in Orlando, ***Great Valley Products*** gave them more ammunition, introducing a prototype of **Impact Vision 24**, a 24-bit display card with an arsenal of extras. Because the IV24 offers some unique features of great interest to Amiga multimedia and video users, *AmigaWorld* obtained an early version to preview here in Video Suite.

The IV24 is not simply a 24-bit display card. Instead, it is a multifunctional graphic/video board with a strong software bundle designed to support the hardware. While not everyone will need every feature, it's a good bet that just about everyone will use several of the available components of the package.

Editor's Note: As you read, please keep in mind that this is not a review. Amiga-World *reviews only final, shipping versions of products. The IV24 board and its software that we examined are at the prerelease beta stage, so you may notice some differences between the features discussed here and those of the final product. According to GVP, the IV24 should be released in September. Look for a full review of the final hardware and software in a future issue.*



The Impact Vision 24's Picture-in-Picture window on the Workbench.

Hardware Features

The board was designed specifically for use in the Amiga 3000. You insert it in the system's top slot position, with in-line connectors for both the Zorro and video slots. (This is similar to the way the Amiga Bridgeboard connects to both a Zorro and PC slot.) Although the card was designed with the A3000 in mind, it is a Zorro II, not a Zorro III, card and can be used in an A2000. Simply connect an adaptor to the A2000's video slot and run the attached cable to the IV24 card in a Zorro II slot. Obviously, because the IV24 uses the video slot, your system cannot include other products that require that slot, such as display enhancers, internal genlocks, or the Video Toaster.

Because the Impact Vision 24 is a 24-bit RGB display card, each pixel on the 768×482 resolution screen can be any one of over 16 million unique colors. Because it is an RGB display card, you can use your standard Amiga monitor or a multisync monitor for the the IV24's display. (Some graphic cards require you to output to a NTSC composite monitor.) In fact, you can use the IV24 with NTSC, PAL, or VGA output systems.

When used in 24-bit display mode, ►

the card lets you use only one image at a time. You can get around this by using it in a 12-bit display mode. While this affords you only 4096 colors at once, they are "true" colors, unlike those in HAM mode. In 12-bit mode, you can have two images in memory at once, so while real-time animation isn't possible, simple page-flipping techniques are. The screen resolution remains the same as in 24-bit mode.

Another welcome feature of the hardware is its built-in deinterlacer. If you are using a multisync monitor with the IV24, you can still get the rock-solid display that A3000 owners (and A2000 users of Microway's flickerFixer or Commodore's Display Enhancer) enjoy. I connected my Amiga 1950 monitor to the IV24 and noticed no obvious differences from my accustomed display. I especially like this feature, because it allows me to use the same monitor for both 24-bit images and the high-resolution displays I normally use for word processing and other productivity applications.

The IV24 is also a versatile genlock and video keyer. It inputs both composite and RGB video signals and is capable of outputting the signal to either a composite, Y/C (S-VHS), or RGB display. The RGB-out option means you can use your standard Amiga NTSC or multisync monitor for displaying the incoming video signal while simultaneously overlaying Amiga graphics. Of course, Y/C support is of major importance to all of us who have made a significant investment in S-VHS video gear. Performing chroma or luma keying, however, requires an optional external key generator.

To fully exploit the IV24, you must use the RGB video-input option, as many of the board's features work only on video supplied as an RGB signal. Unfortunately, most consumer and industrial video sources are composite or Y/C, and do not support RGB-out. To use such equipment, you need a device known as an NTSC-to-RGB decoder. GVP plans to offer one (the price is as yet undetermined), but they are currently available from other sources for a couple of hundred dollars. I used an NTSC-to-RGB decoder from Harmonic Research with the board, and all the features of the IV24 worked quite well.

If your video source is coming into the IV24 via the RGB input, you have yet another feature: real-time frame grabbing in full 24-bit resolution. Supplied with the board is a package of software (AmigaDOS 1.3 and 2.0 versions) that allow you, among other things, to grab frames by pressing a function key. You can then save these frames to disk for use in any software that supports the IFF24 standard.

Again, if you are using an RGB video source, you can take advantage of one of the IV24's most impressive features—Picture In Picture (PIP), a feature that has immense possibilities for the multimedia, training, and educational markets. With the supplied software, you can display full-motion, rescalable video in a Workbench window. The PIP feature displays the video using 12 bits of resolution, not 24, but the image is still very impressive. You can move this video window around your Workbench, resize it with the sizing gadgets, and freeze individual frames within the window. You can control the supplied PIP software from either the Workbench or the CLI.

You can view the PIP video in screens other than the Workbench; in fact, the window is always visible, even if you switch to another Amiga screen. The PIP window frame and gadgets (which are the Amiga portion of PIP) do not switch, so what you see on the non-Workbench screen is simply a panel of video. Because you can control the PIP via command-line software, you can use and control the PIP from other software by using your own custom interface. Again, this makes the PIP function of major importance to multimedia software designers. (At the Orlando AmiEXPO, Blue Ribbon SoundWorks announced that it will support GVP's PIP feature in a future version of Bars&-Pipes. Several other software companies indicated that they, too, will support the feature in their products.)

For those of you wondering if the IV24 requires a time-base corrector, the answer is no. The IV24 accepts and syncs to just about any incoming video source, but the documentation mentions that if you need professional broadcast quality, you will find that the output signal does benefit from a TBC.

Bundles of Software

With the hardware comes an impressive array of application and utility software. Some of the major packages are versions of GVP's own products, and one is a special bundled edition of Caligari, from Octree.

The utilities include a set of CLI commands for putting the IV24 into frame-grabber mode, reading the IV24 registers, loading and viewing both 24-bit IFF24 images and 12-bit pictures, and controlling the PIP functions. One of the major utilities, FYECP, opens a control panel at the press of a function key and allows you to perform several calibrations of the card. In addition, with FYECP you can switch both the RGB and composite output modes between Amiga, full video or overlay; adjust contrast and the red, green and blue components of the RGB display; and control composite phase and composite keyer control. The FYECP (and PIP) software are also fully Workbench-accessible.

Because at this time the Amiga's graphics support system does not work directly with 24-bit displays, all third-party, 24-bit hardware developers also supply some form of paint software with their boards. With its IV24 board, GVP provides MacroPaint, upgraded to full 24-bit functionality. A number of new features were added in the process, including gradient fills and support for color fonts, scalable fonts under AmigaDOS 2.0, and full overscan.

For those interested in 24-bit 3-D rendering, the package includes Octree's Caligari. This is a trimmed-down version, having no point editing or animation module. You can use only one light source, and you cannot make (although you can load) Cubic environment maps. Even with these limitations, it remains a powerful real-time 3-D modeler and renderer. Objects and scenes created with it remain compatible with the full Broadcast implementation of Caligari. While the final details have not yet been determined, Octree tells me that users of the IV24 Caligari will be offered a discount of at least $500 on the latest Broadcast version of the product, which will have full support of the IV24 card.

The final major program is GVP's Scala presentation package. This you use predominantly as a titler for video applications. At least at this point, it does not directly support the 24-bit features of the hardware and is intended to be used in the card's overlay mode.

More Than Just a Pretty Display

The Impact Vision 24 is scheduled to retail at $2199, which makes it a fairly expensive product. When you consider the range of functions it performs, however, as well as the accompanying software bundle, the price seems quite a bit more reasonable. Without doubt, the Impact Vision 24 is a real multi-function, multimedia card that can also be used in serious video applications. I suspect it will be warmly welcomed by many in the Amiga community. ■

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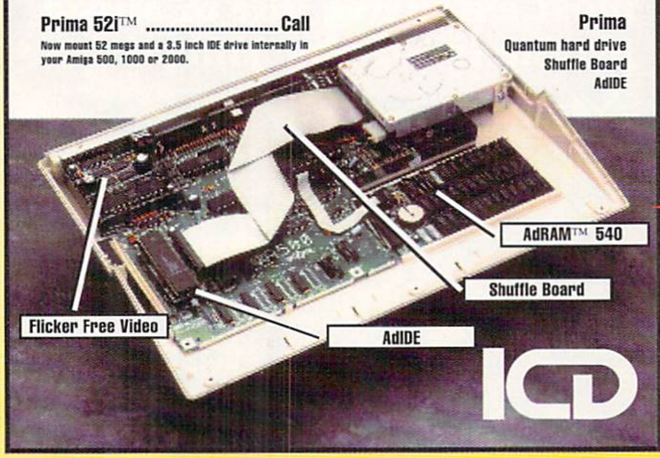
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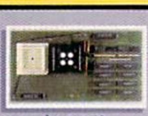
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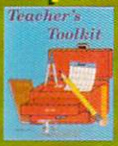


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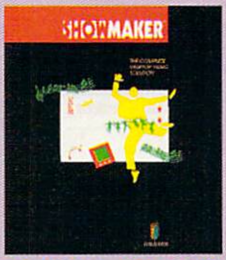
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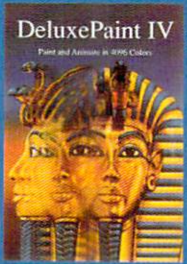
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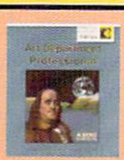


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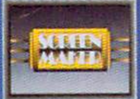
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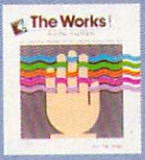
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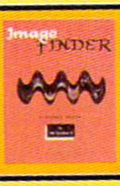
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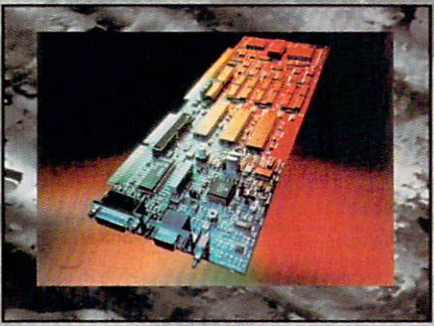
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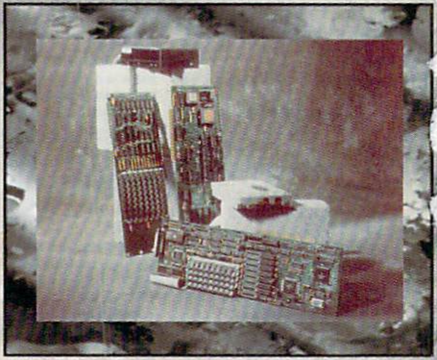
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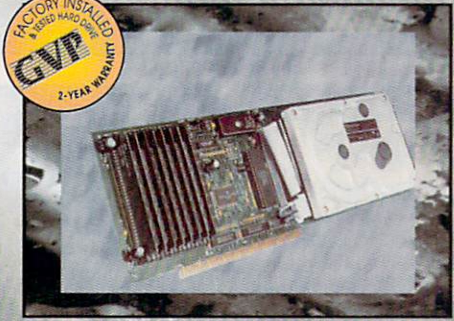
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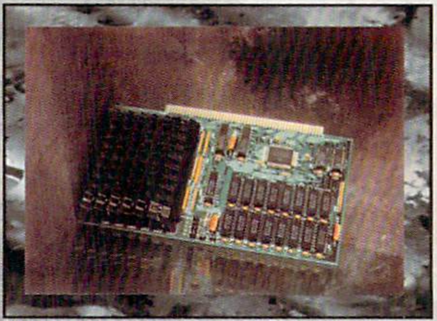


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THE GAME PRESERVE

Secret of the Silver Blades

By Jeff James

Secret of the Silver Blades ($49.95) is the third installment in SSI's popular series of fantasy role-playing computer games. If you've played either of Secret's progenitors (Pool of Radiance or Curse of the Azure Bonds), you'll feel right at home. You even can load in characters created in Curse of the Azure Bonds.



With swordplay and sorcery, you can turn the joke on him.

Like most other games in this genre, Secret requires you to assemble a band of stalwart adventurers to do battle with whatever evil the designer has chosen to send against you. In Secret, your party of six must delve into the frigid depths of an icy mountain range to save a small town of hapless miners from the designs of an oppressive evil force.

All the necessary ingredients of a fantasy role-playing game are here, including loads of spells, magic items, slobbering monsters, and treasure galore. The two-disk game is accompanied by a healthy supply of documentation and playing material. Secret also features an improved combat aiming system that makes targeting your foes for destruction as easy as a click of the mouse.

Whereas Secret features a new plot, a new location and a slew of new monsters, spells, and other goodies, I was struck by a case of dungeoneering deja-vu. Secret is nothing new. Sure, the monsters mete out more punishment, and the traps kill you faster, but I've seen it all before. There also isn't much in the way of creative puzzle solving, as you must meet nearly all the challenges in the game with massive amounts of spellcasting and swordplay.

Secret definitely won't win any awards for originality or inventiveness. The graphics, although nicely drawn, don't seem to support more than 16 colors at once. In terms of sound, the game is poor.

The game does run well on all Amiga models with at least one megabyte of RAM (it doesn't support AmigaDOS 2.0, however), and it offers an icon-driven hard-disk installation routine. Unfortunately, this installation program recognizes only DH0: and DH1: as acceptable hard drive partitions. Amiga 3000 owners and others with "nonstandard" hard-drive setups (without hard-disk volumes named either DH0: or DH1:) must rise to what is perhaps Secret's greatest challenge: coercing the game to operate from their hard drives. Laboriously installing the game via CLI is not a task for CLI-phobes or the weak-willed. This could have been avoided by a more flexible hard disk installation routine, such as that in SSI's Death Knights of Krynn.

Diehard fans of SSI's earlier efforts won't find anything unexpected in Secret. Other than the un- ►

Crib Notes

By Peter Olafson

So ye wants to know the Secret O'Monkey Island, do ye? Well, fetch me a bit o'grog, there's a good lad, Jim, and I'll tell ye.

You can explore a fair amount of of Melee Island right at the start, but you won't know what to do that way. To get directions, you should pay a visit to the Scumm Bar in town (named for the game-development system, by the way). Talk both to the two pirates up front and to the three important-looking pirates in the back. Ask them everything you can. It will set you up nicely for the missions that follow.

A little aside here. Yes, there's a closeup picture of the bar dog on the package, but evidently he was trimmed from the game to make room for something else, so don't make a big issue out of talking to him. The pic never shows up. (He's a pretty ruff character, anyway.)

You'd like to have a look at the kitchen, I expect? Just wait until the cook gets out of sight and then pop in. There are a few things back here you'll want, and two are available for the taking. The fish? Well, OK, you see the fish out on the dock, but there's a seagull with an unnatural affection for it. Maybe you should explore that dock a bit more, eh? Don't forget to *cook* the stuff, too. (There's a pot abubble on the stove.) A herring won't do much good. A red herring, however, is useful. (Remember, this is a Lucasfilm game!)

You're about ready for a trip into town proper. There's a bloke here acting like he's fallen out of a spy movie. You can't afford to deal with him yet, and besides, you don't strictly *need* the map he's selling, but it may speed things up later on. ►

To locate developers of the games reviewed, see the "Manufacturers/Distributors Addresses" list on p. 118.


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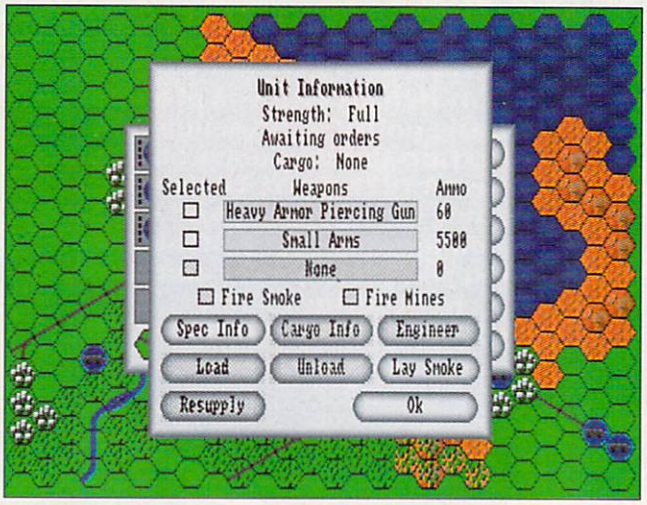
compromising hard-disk installation routine, Secret operated smoothly and solidly. Casual gamers looking for something new and different, however, would be well advised to journey past Secret and spend their gaming dollars elsewhere.

BRIGADE COMMANDER

By Rob Hays

A detailed, mouse-controlled wargame, Brigade Commander (TTR Development, $44.95) pits you against the computer, moving your units around a hex-grid map. Depending on the scenario, the map may be much larger than a single screen. Clicking on a hex-grid brings up a requester showing all of the units in that grid.

Double-clicking on one of these units brings up weapons status and damage levels. Further specific information is available on the unit, showing its capabilities, morale, and so on. More than 20 types of weapons are modeled, ranging from horse-drawn carts to tanks to jet aircraft and attack helicopters.



The troops await your orders: Move or make a stand.

The program disk contains seven scenarios, each of which you can play at three difficulty levels, acting either as theU.S./Allies/Good Guys or the U.S.S.R./Iraqi/Bad Guys. Also in the package is Operation Desert Storm, the first of several planned data disks, with an additional 19 scenarios. If that's still too limited, the scenario editor allows you to modify or construct a battleground and change any of the weapons characteristics. For instance, you could decide that the M1A1 tank could carry troops and be amphibious!

Because Brigade Commander is played in realtime, you can get blown away if you stop to think about a situation without putting the game in pause. You can pause or save a game at any point, allowing you to recover from disastrous decisions.

Noncopy-protected, Brigade Commander multitasks well, includes a hard-disk installation routine, requires one megabyte of RAM, and will run under Workbench 2.03. The only problem I encountered was a tendency to lock up the computer. This was triggered by loading a scenario and then loading a different one. My guess is that this is caused by running out of chip RAM, because the problem didn't happen on the A3000.

Brigade Commander does not require joystick-wrenching reflexes, but neither is it like a chess game, with many minutes to plan your next move. All in all, it is a fine example of its genre.

MEGATRAVELLER 1: THE ZHODANI CONSPIRACY

By Peter Olafson

MegaTraveller 1: The Zhodani Conspiracy (Paragon, $59.95) is nothing if not deep.

That feeling starts right at the front door with creepy music and documentation the size of a small city's phone book. It continues into the character-creation routine—a long but delightful process, in which you see each character through his or her career-to-date and control how they become what they become. It's much more intimate than just rolling up sets of disembodied numbers; you almost feel you know these folks. The feeling pursues you into the Sim City-ish community, where you begin the game under fire by strangers and ►

The pirates over on the left are d-u-m-b. All their banter hides one item. They have something they can't give away, and you can actually extract some loot from them when you get it. (A good way to cozy up to them is by flattering the rat.)

There's also a little voodoo shop in town. Our pirate wannabe, Guybrush Threepwood, is a bit of a wimp, but there do seem to be some extra chickens lying about, and one won't be missed. Sort of an odd bird, isn't it?

The breath of that pirate in the jail is a bit ripe, isn't it? You can do something about that by chatting up the storekeeper, and once you can actually talk to the prisoner, he'll try to strike a deal: a file for something that will take care of the rats.

This wouldn't be a bad time to strike out into the countryside, in particular to the area around the path fork a ways north of town. It's the entrance to a little maze. Most of the stuff here is securely nailed down, but there's one little bright plant that isn't. Take it.

Visit the circus as well. Provided you have the pot, you're in good shape, and should come away with enough money to buy a shovel and a sword in the shop.

Along the way, you may run into an ogre guarding a bridge. Listen to what he asks for. Sounds pretty fishy to me.

Once over the bridge, you'll run into Captain Smirk, who will teach you how to use your sword—if you *have* one and bug him enough about it.

And now, in encounters with traveling pirates, comes one of the more clever spots in the game; it seems your wits have to be at least as sharp as your blade. This is largely a matter of choosing insults to which a pirate can't respond and finding quick come-backs to the pirate's digs at you. You'll know you're ready to meet the Swordmaster when a pirate tells you so.

But how to find the Swordmaster? Well, as you might expect, she's in that little maze as well, but you could spend some time searching that way. The shopkeeper is warm for her form, and will carry your message, but will always bring back a "no" answer. Perhaps if you were to follow him…

In the same maze is the lost treasure of Melee Island. You'll simply *Continued on p. 92.*

just a bit lost. (Don't bother fighting; run!)

MegaTraveller is the computer version of Marc Miller's popular science-fiction role-playing game for Game Designers Workshop. In this first episode of a projected series—MT 2 is already out for IBM—your party of five is exploring, trading, and fighting on 28 worlds of the Spinward Marches in an effort to stop a war between the Imperium and Zhodani Consulate.

The detail with which the game was laid out is impressive. Your characters can acquire about 70 different talents and wield 30 weapons—all handled by pointing-and-clicking in a blaze of 32-color Amiga graphics. (I do wish some of the sounds were a bit more prominent.)

The encyclopedic manual serves a purpose. Read it before you start, both for the rules and for the background. It's a monster of a game—it comes on two disks—and not the most intuitive one around. Space travel and combat both require some sorting out to execute and patience to master, but the real-time combat's exciting and especially realistic. The enemies don't wait around for you to reload, and don't stand still to be blasted. And trading between planets—a good way to earn money—is simply fun.

MegaTraveller also installs itself painlessly on hard disk and (apart from a few long loads) plays without any major hitches.

Like Robert Frost's famous woods, this game is lovely, dark and deep—and players will go miles before they sleep—but I suspect it needs a little more thickness to go with the depth. (For instance, character interactions are trifling, and the shops have the feel of those in arcade adventures.)

Perhaps we'll see thickness in the sequel. In the meantime, MegaTraveller 1 constitutes a most promising beginning.

F-15 Strike Eagle II

By Peter Olafson

MicroProse's F-15 Strike Eagle II ($59.95) isn't so much a flight simulator as a fight simulator. It's ideal for folks who want to dispense with the advanced strategy and command sets of games like Spectrum Holobyte's Falcon and MicroProse's own F-19 Stealth Fighter and, as it were, cut straight to the chase.

F-15 II is great at cutting to the chase. When you start, you're already airborne—no takeoffs or landings required—and there are as many as four targets head-to-head with you. Roll 'em and smoke 'em: No time for missiles, so open up with your cannon, and then pull up and switch to the look-back view to see the enemy pilots parachuting to safety.

This is not just a matter of shooting down everything in sight, although you can certainly do that, too. Each mission—in four theaters and on four difficult levels—has primary and secondary targets, and a host of weapons, defenses and views (ten of them) to help you get there and out.

The all-important frame rate is quite good, the controls are responsive (a bit too responsive on the 3000), and the sound is solid. Bring your plane down under 1000 feet for a good look at the wealth of excellent ground detail—comparable to that in F-19—and the title screen is simply the most handsome Amiga title screen MicroProse has ever produced.

If you played the original 8-bit F-15, you'll like the added presence of cloud cover, dithered horizons, smoke columns from blasted targets, support for analog joysticks, and more. The manual is, of course, the usual superior MicroProse work. I love this game.

It's extremely easy to play. The most common commands are handled via keyboard by their first letter. Want to know where your primary target is? Just toggle through the waypoints by pressing W, and then alter your plane's heading until the yellow arrow atop your screen is centered—and that's typical of the ease with which you can control your aircraft.

Unfortunately, F-15's a victim of the same hard-drive installation bugaboo as Railroad Tycoon (see review below)—it doesn't recognize more than one partition or offer to write the necessary assigns to your startup-sequence—and there's a recurring flash of an odd-colored screen when you switch between some of the cockpit views.

To be honest, I barely noticed. I already had my sights set on the next target.

Action Stations

By Rob Hays

If you're looking for the most authentic representation of Naval strategy and tactics training from the years leading up to and including WWII, then Action Stations (Raw Entertainment, $49.95) is a "must have" simulation. It is a two-disk, turn-based, tactical simulation of Naval surface warfare, covering the years 1922–1945.



Keep the seas safe, or switch sides.

More than 180 classes of ships from all eight seagoing nations involved in WWII are modeled, including some that never made it off the drawing boards. You are presented with detailed information on number and types of weapons, their placement on the ships, available ammunition, and much more. The Battle Plot screen uses symbols similar to those developed by the U.S. Navy to present maximum information with minimum clutter.

Except for entering specific numbers, the game is controlled entirely with the

Continued on p. 90.

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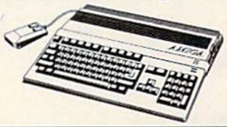
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From p. 87.
mouse. You can play either side of an engagement and can even switch sides at any time if you're playing against the computer. If you prefer a human opponent, opt for two-player mode.

Although the game offers a huge amount of detail, it is not overwhelming. For instance, choosing automatic targeting of the weapons allows the newcomer to jump right in without worrying about which weapon you should aim at which target.

How accurate is this simulation? According to the manual, the programmers set up actual conditions from a WWII battle and let the simulation run. The computer reported its first hit within 120 yards of the actual ship's position. Hit rates were within 10% of historical records.

Don't think you'll know ahead of time how the battles turn out, however. Each of the 31 included scenarios allows for randomizing ships' positions from their historical locations at the start of the battle. In addition, you can select one of seven skill levels for your computer opponent. If that's still not enough, it includes a program to generate a scenario from either selected or random values, and another to construct scenarios from scratch.

I have only minor complaints with the game, one of which is the organization of some of the menus. To check damage reports for more than one ship, you must exit the report screen, reenter it, and then select the next ship. Why not just have a "Check Another Ship" menu choice?

Otherwise, Action Stations is very polite. It installs on a hard disk, runs under Workbench 2.03, requires one megabyte of RAM, and multitasks if memory permits. This one will keep you entertained for a long time.

MoonBase

By Graham Kinsey

In this technically advanced age of satellites and space shuttles, we are still a far cry from colonizing outer space. Even from your computer, building a lunar colony is no small feat as MoonBase (Merit Software, $49.95) proves.

The primary goal in MoonBase is to create a lunar base that is self-sufficient. You have 100 years to make the lunar operation a profitable venture, and NASA guarantees you funding only for the first ten years of operation. First, you must select a suitable terrain for your base. Next, you must build one or more habitation modules (they come in three sizes) for your founding crew to live and work in. (You can add more as needed.) Just building the quarters doesn't make them usable, however. You need some sort of power generator and thermal control.

Once your crew is safely housed, it's time to make some money for the base. You can make it in three ways: selling raw materials, manufactured goods, or tourism. Three raw materials can be found in the moon's soil: helium-3, liquid oxygen, and water. Helium-3 can be found anywhere on the moon, but you have to look hard to find liquid oxygen and water. If you can afford the huge manpower costs of a material or electronics plant, you may decide to manufacture your way to financial success.

Your final option is to live off the rich tourists. Of course they'll come only if you've built a hotel for them, and don't count on their staying very long if you haven't built recreational facilities as well. One-sixth gravity does not hold the typical tourist's interest, so you need to develop some bizarre space attraction.

Even if you can afford to build all of the appropriate commercial buildings you need to make money, your problems are not solved. All the people who are going to work in those buildings need habitation modules to live in. Adding more buildings will increase the demand for power and thermal control. While one radiator can cool off dozens of buildings, a bank of solar cells doesn't go very far, forcing you to either invest heavily in solar cells, or build a dangerous nuclear power plant.

Your new workers also require food and water. You can build a greenhouse and grow some food on the moon, but if you need more, you'll have to ship it from Earth. Finally, once you're in a position to sell goods back to Earth, you have to deal with the present market value of your goods, which changes according to real-life supply and demand.

MoonBase's graphics and animation are less than impressive, but this in itself is easily overlooked. The constant screen/scenario update delays, however, are detrimental to the game. It only takes a second or two each month of game-time to update a scenario on an accelerated Amiga, but it can take over 20 seconds on a 68000-based machine. At least the game is not copy-protected, so you can install it on a hard drive.

As for the simulation itself, I found it to be rather limited. Although you have 100 years to make the colony operational, MoonBase really only runs for 30 game-years. By that time, your lunar colony is either broke or raking in the cash. While I liked the basic scenario, it is still no SimCity.

Railroad Tycoon

By Peter Olafson

Is this any way to run a railroad? You'd better believe it. Sid Meier's Railroad Tycoon (MicroProse, $59.95) gives you the delightful opportunity to train with the best of them as an early-1800's would-be rail baron.

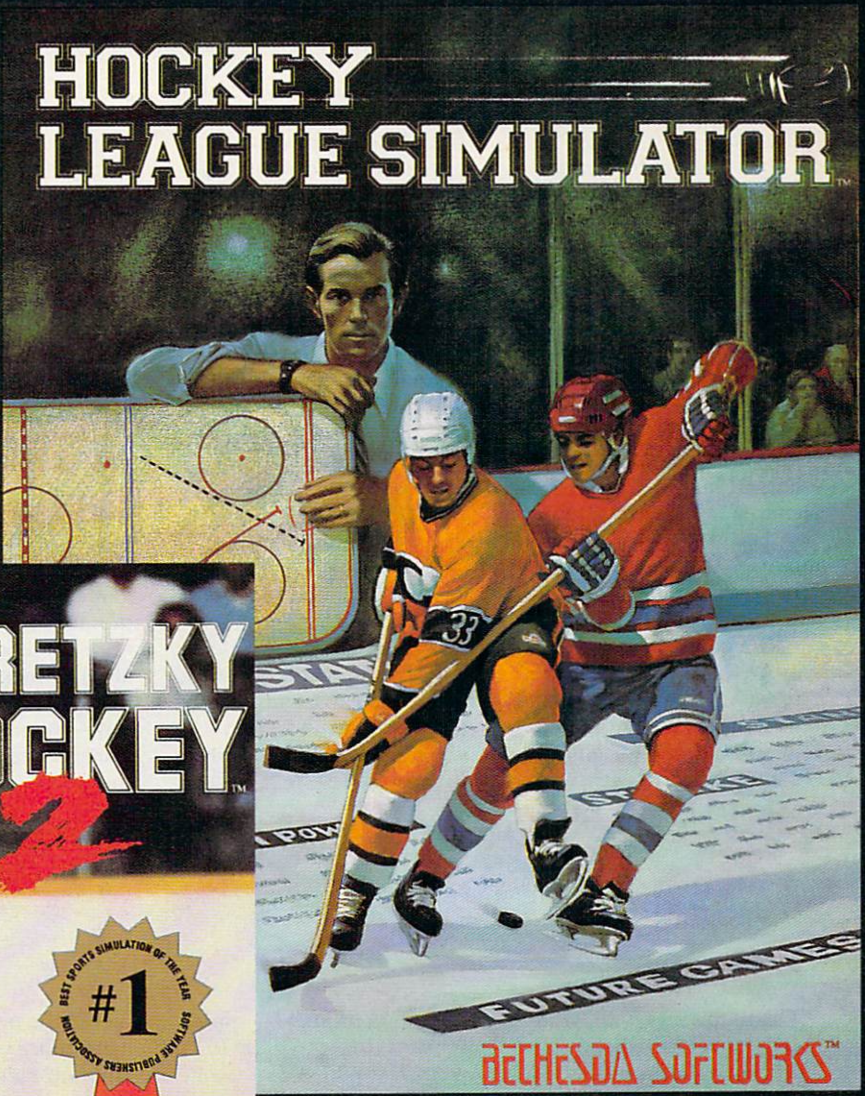
And in what style! This is just the sort of strategy game that has been lacking for the Amiga, and just the sort of superior implementation that was needed. Railroad Tycoon is the biggest, most sophisticated train set in the world, and it's right in your living room (or wherever you happen to put your computer).

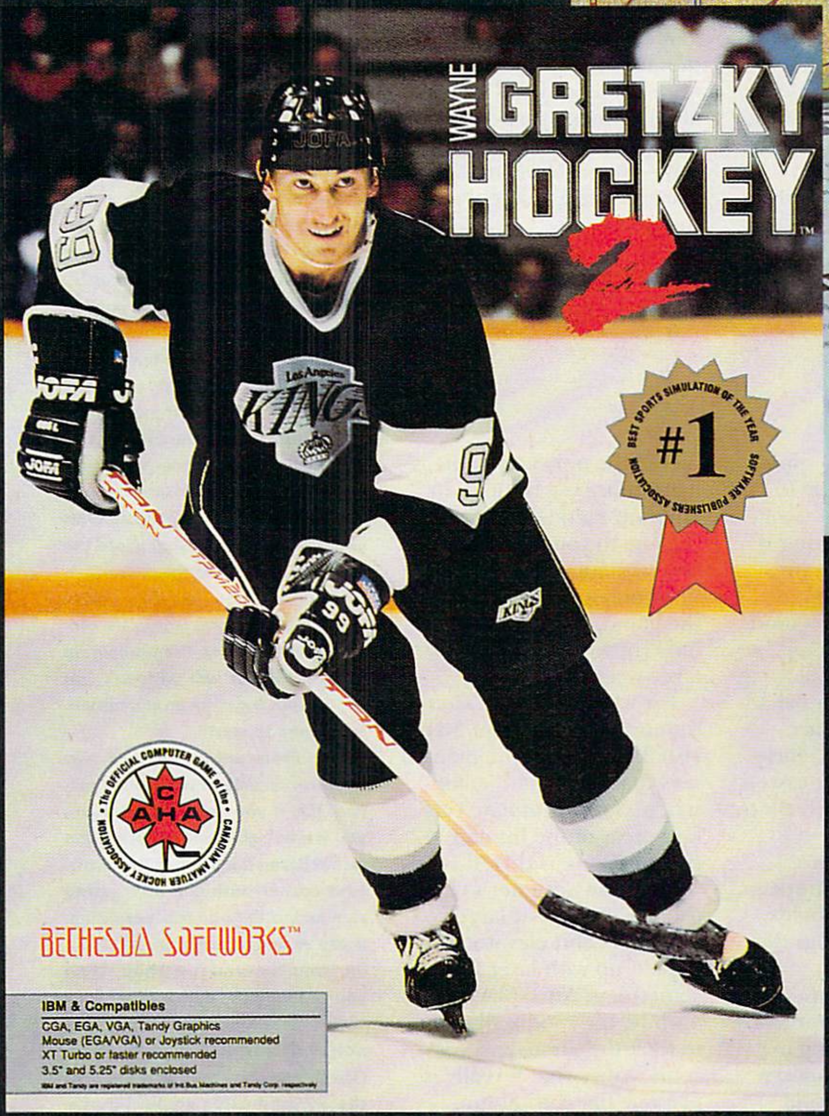
They apparently don't delegate authority on this railroad; your fingers are stuck in many pies. Among your tasks are to set destinations, lay track, buy and maintain engines, select types of freight cars, build and improve stations, install industries, take out and pay off loans, invest in other railroads and track progress ►

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via a variety of reports. All this is accompanied by an array of digitized sounds (down to bells signaling a train's arrival) and animations (including the little chugging locomotives on the map).

It's all great fun, and, while this sounds like a lot to do, it's not. Everything's controlled either from menus or pointing and clicking: a switch, a train, a station.

While the full-color map where much of your business is conducted is pretty, an especially nice touch is the ability to summon a blue-backed map that shows simply a skeleton of your trains, rail lines and important installations. There's information just about everywhere you look.

Of course, there are a few other fellows (all with the initials A.I.) running their own train sets simultaneously, and although each of the game territories—eastern and western US, England and Europe—is large, you're bound to bump up against one another eventually. Rate war!

You can keep them in line by setting the game to friendly competition (as opposed to cutthroat) and keeping the difficulty at the lower end of the four levels. There's also a choice between no-collision or dispatcher operation, and between a simple economic model and a complex one governed by rules of supply and demand. I could go on and on.

Good as it is, RRT could use some small tweaking. MicroProse needs to upgrade its hard-disk installation routines to include assigns and allow for multiple partitions. Also, When the game is set to "turbo" speed—the speed of choice when you can't wait for the train—you can't summon any reports. (They simply flicker on the screen and disappear.) Furthermore, you can't cut off the introduction until its final screen.

Gamers who've seen the IBM version may be disappointed at the curious omission of the delightful minor animations that graced the bridge-building scenes, and the spectacular major one in its intro. (What, the Amiga can't handle animations?) And, in running the game from hard disk under Kickstart 1.2, I also found it guruing occasionally—a problem that doesn't seem repeated under 1.3. These are annoyances, however, not real problems. There's no such thing in this game.

If you love trains, you will have a field day; Railroad Tycoon is one of those games you will want the moment you see it. And once you boot it—it runs on all machines with one megabyte of RAM, by the way—you will be hard-pressed to do much of anything else.

Continuum

By Rob Lawrence

The name says it all. Unless you enjoy virtually pointless and seemingly endless video games, read no further. Data East might deserve some credit for trying a new concept in 3-D arcade games, but in the long run I'd give Continuum ($49.95) a mediocre 5 at best.

You never do find out exactly what you are; you simply guide this "mobile" through a maze of large, interconnected rooms in search of 32 crystals and cubes to the accompaniment of two (although the box would have you believe there are 12) good soundtracks. That's it.

For excitement, you get to bounce from platforms suspended in the air. Once you have enough vertical bouncing momentum, you apply forward thrust to glide to your next pad or exit doorway.The screen updating is reasonably quick (for an IBM port).

The camera view (behind or inside the mobile) can be rotated up or down, allowing you to better view your shadow for ground reference. Unfortunately, your vehicle is the only object that casts a shadow, making it difficult to judge other objects' positions. Some rooms have moving or tilted platforms, and some have forcefields and other thingamajigs that knock you off course.

Thankfully, the game contains a temporary memorize function for saving a position before you make a stupid mistake. In action mode, the only way to die is by running out of time. In emotion mode, you can explore to your heart's content without a clock. You need one megabyte to play the game, but at least the only copy-protection is with a key word.

For what it's worth, Continuum has a pleasant 3-D visual effect, and the manual says that the rooms' color schemes will stimulate certain areas of the human psyche (yeah, right). If I were in the designer's chair, though, I'd give it larger structures and elevators, and hype it up with laser fire or something. After playing for a while, the rooms all start to look the same, and you soon realize that it really is just one big continuum.

From p. 84.

need to wander until you find the "X" that marks the spot. (Not to mention the pillar and plaque!) It will surprise you; it's more like the lost merchandise from the Melee Island gift shop.

Now you're about ready to visit the governor's mansion, which is on the other side of town. Beware of the piranah poodle watchdogs. You have the meat. You just need to...spice it up a bit first. Perhaps it needs a bit of flour? (Or did I spell that wrong?)

Do get the vase on your way in, and visit the room on the right. (You can't really go anyplace else voluntarily.) This sets off an entertaining self-parody that occurs automatically and almost entirely out of your sight. It doesn't get you the idol, but it will net some needed items. Gopher repellent, eh? Gophers are a little like rats, yes? Make a quick scoot back to the jail, and then back to the gov's house. (Whoa! The gov is a babe! And she likes you! And you suddenly turn into someone a little less articulate than Porky Pig!)

The Melee Island sheriff is like every small-town sheriff in the movies. He doesn't like you, and he's got his eye on the governor. So here you are on the ocean bottom tied to your idol, with lots of potential ways to cut the rope tantalizingly out of reach. Of course, you don't need any of them. Just pick up the idol and be about your business.

It seems the dreaded ghost-pirate LeChuck has been by while you were swimming and made off with your...ah...his, beloved. (Note the way you respond to the governor's reelection poster, now that you're smitten.) The game is into its second phase, and (as the blubbering cook at the bar will tell you), you need to put together an expedition. But where to start?

Ah! There are just one or two spots on the island we haven't visited. (Or, if you have visited them, you weren't able to do much.) One is that island house off in the northeast corner with the interesting sign and rather odd cable crossing. If you've had a gander at the chicken from the voodoo shop, then you've found the path.

Tell Meathook about the governor and "stroke" his creature. (That's one crew member.) Go visit the Swordmaster again. (That's two.) And finally, you can't bargain ►



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that jail prisoner through the bars. You're going to have to spring him, and you don't have a key.

You do, however, have grog—which you know (if you talked to the important-looking pirates at the start) is a rather volatile substance. If you revisit the Scumm Bar, you'll note that the pirates have vanished, leaving behind their mugs. Grab all of them, fill a mug from the grog barrel in the kitchen, and head for the jail. When one mug is about to melt down, switch the grog to the next and so on. Finally use the grog on the lock.

Now you have a crew. (The prisoner plays a trick on you and takes off. But don't worry; he'll turn up.)

Now, as for a ship...There's just one place that sells 'em, but while Stan will talk (and talk and talk), he's not ready to deal with you. You'll need credit, and the shopkeeper in town won't give you any, as you're not gainfully employed. (Don't bother lying; he knows better.)

Of course, you're a pirate, so there's a sneaky and underhanded way to get credit anyway. Watch and record how he opens the safe (a series of pulls and pushes of the handle). Once he's replaced the credit papers, ask him to get the Swordmaster again. There's no fool like an old fool, and off he goes. Open the safe with the same series of pushes and pulls, and head back to Stan's.

More problems: You can't afford a really good ship, and should go for the one out at the end of the dock. You'll have to drive a hard bargain. Common-sense suggestions: Stay low (start at 2,000 pieces of eight and work your way up); be difficult (threaten to leave); keep him talking (about the silly options); and monitor the price. Eventually, you'll have yourself a boat.

Unfortunately, while your crew members had more than enough energy to thwart you when you were just a snot-nosed kid, they've gone soft with you as captain, and, once aboard ship, you're left to your own devices. It's time to explore. (Look everywhere; the game's just thronging with stuff to pick up.)

This part is more a shopping expedition than anything else. Take the diary in the desk. Read it for fun; it belonged to the ship's previous owner. Take the pen and ink also. In the kitchen, you'll find a pot and a box of cereal. (Be sure to open the cereal!) In the hold, get the rope and gunpowder from a keg, and wine from a chest. Topside, nab the pirate flag as well.

What a little klepto you are! Naturally, the key in the cereal works on the cabinet in your room. There you'll find a recipe and some cinnamon sticks. You should have everything from the recipe (or at least things resembling them) by now.

Now, this is one of the sillier parts of the game. The ink, cereal, gunpowder, pirate flag, cinammon, chicken and gunpowder, components of a voodoo spell, all go into the boiling pot, and you're out like a light, only to wake up with the ship off Monkey Island. How convenient.

Arrr! Help me to a chair, Jim, I'm afeared the grog has addled me brains. Ah. Better. Thankee. That's all I can remember fer now, me boy. Let an old pirate rest. Try me again in, say, January.

Stepping-out-of-character department: Since so many of you liked the cheats that we ran last December, we'll run a mess more next month. Yo ho ho, and a Merry Christmas!

If you need help with an adventure game, you can write to me via US Mail at 222 Henry St., Garden Apt., Brooklyn, NY 11201 or via electronic mail on GEnie as P.Olafson1 and on Portal as Peter Olafson. Enclose a self-addressed stamped envelope if you want to receive a personal reply by the year 2000. (Bit of a backlog!) ■

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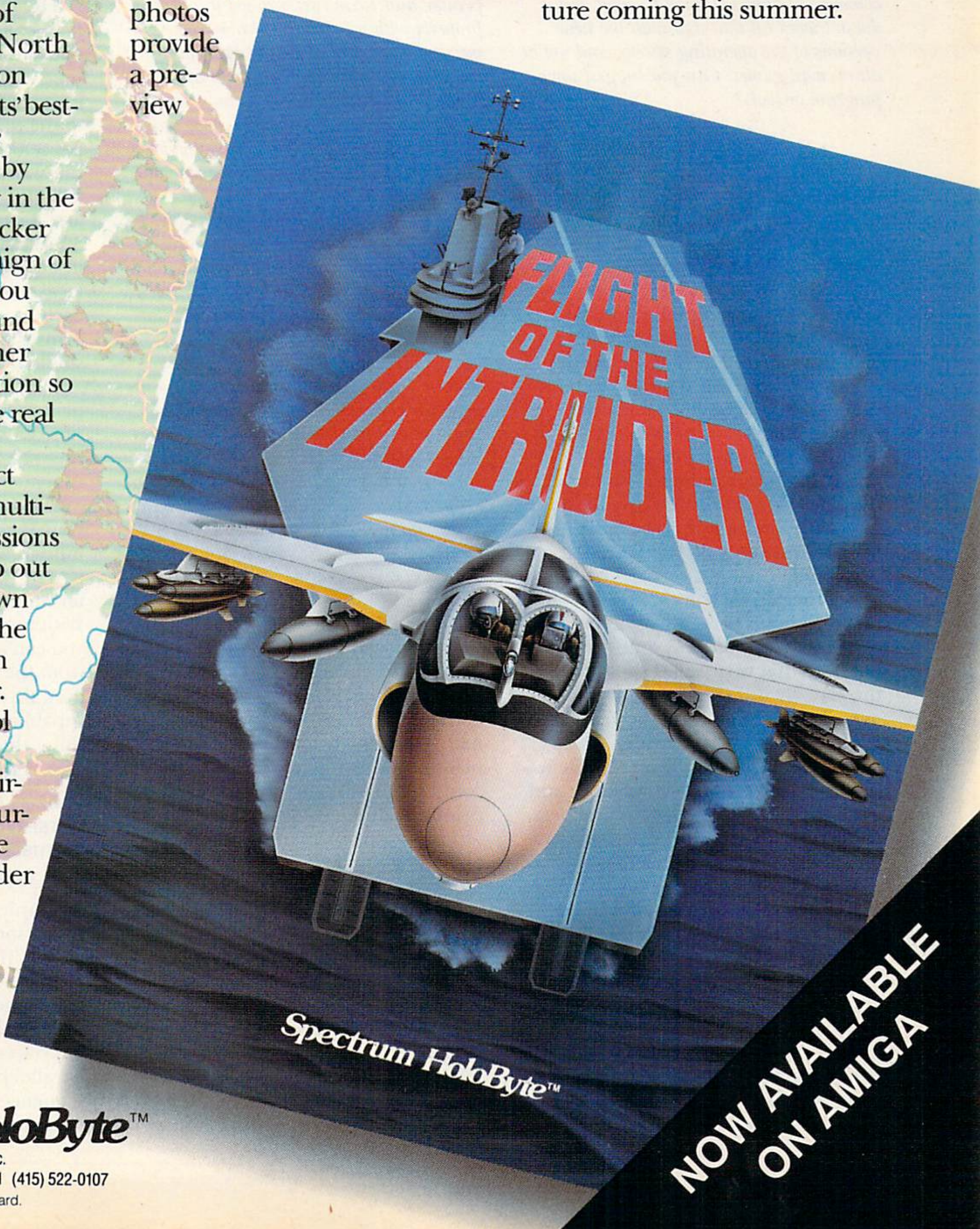


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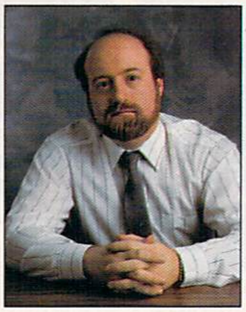
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HELP KEY

Lou comes up with answers to screen-capturing and PostScript laser-printer puzzlements.

By Louis R. Wallace

Grab That Screen!

Q: *I want to be able to grab screens from a variety of programs, some of which are commercial games. I have Grabbit, but it doesn't work all that well with the new versions of the operating system, and not at all on most games. Can you suggest some program or tools?*

L. Moone
Pittsburgh, Penn.

A: That's a problem we often have here at the office, and there isn't really any one single thing that can solve it. Instead, we rely on a broad range of software and hardware to do the job. For example, if the program multitasks, I usually use ADPro (ASDG), which can "load" a screen that is in memory. Another set of tools that I often use is called SSS_V1.0.ZOO. This set of screen grabbers includes a Grabbit-like command, a time-based grabber and one that allows you to browse through the Amiga's memory looking for any screens it can find. It is available on most of the networks (on GEnie, it is file 5197).

Another useful software package is Steve Tibbett's ScreenX utility, which does far more then just grab screens, but does that very well. Finally, for those really difficult programs that take over the machine, I use the Datel Amiga Action Replay II cartridge on an A500. This device will stop a game in play, has a screen-save command, and works where software screen grabbers generally fail. The only drawback to any of these screen grabbers is the fact that they do not capture any sprites that were on the screen (although BOBs and other bitmap objects are handled just fine).

When you capture screens from software, keep in mind that in many cases, especially with commercial software, the images, backgrounds, interface—and in general virtually everything about the image—is copyrighted and cannot be reused without permission.

PostScript Printer Quirks

Q: *I recently purchased a PostScript laser printer, and I can't seem to get it to work properly with my Amiga. I have tried with varying degrees of success to print documents from a number of different applications. When I try printing a simple multiple-page document from excellence!, only the first page gets printed, despite the fact that I specify the entire document from the print requester.*

When I attempt to print even simple documents from PageStream, the status panel on my printer seems to indicate that it is processing my document, but after a few minutes the panel returns to its ready state without printing a single page. I know there is nothing wrong with my printer, because I was able to print pages using my neighbor's MS-DOS-compatible computer. Right now, I am limited to printing pages using the printer's HP-compatible mode, but obviously I want to utilize the superior graphics and typeface-handling abilities of PostScript that I paid extra for. Help!

J. Stepfordman
New York, N.Y.

A: I referred your question to Loren Lovhaug, who recently wrote an *AmigaWorld* feature comparing various PostScript printers for *AmigaWorld*. According to Loren, there are two primary reasons why documents fail to print properly when using a correctly connected PostScript-compatible laser printer with the Amiga.

The first involves the amount of memory you have in your printer. Most modern PostScript laser printers are sold equipped with at least two megabytes of memory. Some printers, however, most notably TI's microLasers PS-17 and PS-35, come equipped with less. Due to the complexities and power of the PostScript page-description language, it requires a great deal of memory overhead. For simple documents, two megabytes is generally adequate; but documents containing downloaded typefaces or complex bitmap or structured graphics can easily overtax a printer equipped with only two megabytes of RAM.

The second reason concerns your printer's internal PostScript job-timeout setting. This setting controls the time PostScript will wait for instructions from a computer that is sending data to the printer when an "abnormal" pause occurs during the process. Once this wait time is exhausted, PostScript assumes that a problem has occurred, and it cancels the current print job. Since many PostScript printers are used in multiple-computer environments or local area networks, this capability is useful in that it prevents a networked printer from being locked out if a single print job terminates abnormally.

Curiously, Loren found that every printer he tested had a default job-timeout setting that was too short for use with Amiga applications. For most Amiga owners who are not on networks, Loren recommends changing your PostScript job-timeout setting to infinite if you are experiencing difficulty. This will prevent PostScript from terminating your print job prematurely. With most modern PostScript printers, you can adjust the job-timeout setting from the printer's control panel. However, if your printer does not have this capability, you can adjust the setting by using the following PostScript routine:

```
SERVERDICT BEGIN
0000
EXITSERVER
STATUSDICT BEGIN
0 60 0 SETDEFAULTTIMEOUTS
```

Simply enter the routine into a word processor or text editor and save it as an ASCII file called "setjobwaits". Then send the file to your printer using this command from the Amiga's CLI: **copy setjobwaits to par:** (assuming you have interfaced the laser printer using the parallel port). Once you have sent this sequence, the printer will store the new job-timeout setting permanently. ■

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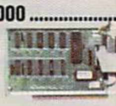
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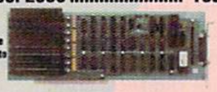
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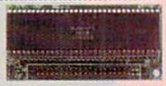
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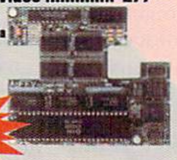
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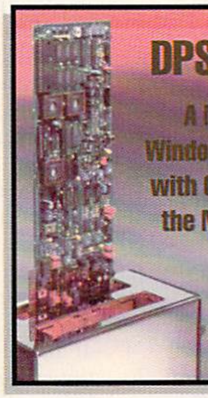
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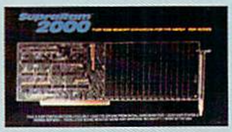
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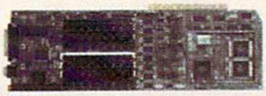
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From p. 28.
sion, CanDo, and ShowMaker—can display HAM-E pictures. It is also possible to take a series of screens, compress them into an ANIM file using a program like the freely distributable AnimBuild, and play back the animation using a program like ShowAnim.

The second program, Register Paint, is a 256-color paint program that at first glance resembles DeluxePaint (Electronic Arts). With its bar of tool icons, you can draw freehand shapes, straight lines, ellipses, and rectangles. What may elude you at first, however, is this program's staggering number of features.

In addition to the large number of drawing modes, Register Paint provides special effects functions such as light wash, dither, smear, focus, and average. The program supports stencils, a wide variety of fill styles, several brush-manipulation operations (including perspective rotations), and sophisticated color cycling and "glow" operations (which randomly change a single color register over time).

What's more, you can invoke almost all Register Paint functions from macros or scripts. Thus, while the program has no interactive animation capabilities, you can, with a little determination, create animations by writing a script to control a series of frames via software and then compressing them into an ANIM file.

The most significant of the three HAM-E programs is Image Professional (IP). IP started out as a full-featured image-processing program, but acquired 24-bit paint capabilities along the way. In my opinion, this is one of the most capable pieces of graphics software available for the Amiga. IP's list of features reads like the Manhattan phone directory: There are dozens of image-processing functions, ranging from simple contrast and color adjustment to advanced effects like spiral blur, melt, and wave distortion.

IP's composition functions let you combine images from two different buffers and apply various patterns of transparency to blend the images together. You can even unite blending functions and effects, so as to gradually phase in an effect from one part of the image to another. Because IP includes its own integrated paint program, you can paint directly onto images that you've just manipulated. IP's paint program is even more feature-laden than Register Paint. Its options include brush fade out (to simulate a paint brush that is drying out), painting with a smooth spread of colors, and a wide range of transparency and blending options.

Besides a generous serving of processing functions, IP offers extensive ARexx support. For example, you can create macros to invoke several functions in a given order, thereby creating your own "super commands."

Unfortunately, IP's menu structure also reads like a phone book, so don't expect to pick up this program in the morning and be creating masterpieces by lunch time. The Process panel is loaded with 68 separate function buttons, each one leading you to further choices. The F/X panel button, for example, leads you to a screen with another 24 function buttons.

Also, the performance is not particularly impressive. Many functions take a long time to execute, even on an accelerated machine. The program code alone weighs in at almost 400,000 bytes, which means that although the program will run on a one-megabyte machine, two megabytes are recommended (and are required on the latest version). Given enough time and memory, however, you will find Image Professional to be a remarkably powerful tool.

Alternative Possibilities

If Black Belt's own HAM-E software doesn't appeal to you, there are plenty of alternatives. HoloSoft has prepared a version of Graphics Workshop that works in HAM-E register mode. Graphics Workshop is best described as DPaint on steroids. Its version of the Move requester, for example, lets you plot the path of ten different brushes at once.

For those who favor HAM paint programs, Oxxi offers a HAM-E version of SpectraColor, its HAM paint and animation package. In addition, Progressive Peripherals' 3-D Professional has aHAM-E mode, and ASDG has already released a preliminary HAM-E saver module for the Art Department Professional, and plans even more support for the upcoming ADPro II.

Thanks to IP's direct support for NewTek's 21-bit Digi-View buffers, you can easily operate at the digitizer's full resolution (if you have enough memory to run both programs at once). Black Belt is reportedly encouraging developers of 3-D rendering and animation programs to support HAM-E directly. If you're a programmer, you might be interested in the examples and information on how to access the HAM-E device from your own programs. The company will even provide free Register Paint source code upon request!

The fact that HAM-E is an RGB device—as opposed to composite devices like DCTV (Digital Creations) and the Video Toaster (NewTek)—has both positive and negative implications. On the positive side, unlike DCTV and the Toaster, HAM-E works with both NTSC and PAL systems. In addition, RGB displays tend to be sharper than composite displays. This means that in register mode, you can determine the color of individual pixels, something that you just can't do with composite displays.

On the negative side, a sharp display makes the reduced horizontal pixel resolution more noticeable. Black Belt's answer is called HAM-E Plus, a piggyback board for an additional $130 that adds hardware antialiasing. While this enhancement softens jagged edges, it does nothing to change the number of pixels that you can directly address. In most cases, the effect is so subtle that you can hardly see it from more than a foot away, so be sure to take a look before you spend the extra money.

Another side effect of sharing the same RGB display as the Workbench is that the signature data (or "magic cookie") that activates the HAM-E modes appears on the screen as a couple of thin lines of garbage at the top-left side of the screen. You can get rid of these lines by using an overscan screen, on which they are above the visible screen area

Some users, however, may not appreciate this solution. For one thing, it's difficult to get overscan ANIM files to animate smoothly. For another, overscan positioning can cause problems of its own. If you use a typical video-resolution screen (368× 480), the "magic cookie" may be positioned so far off the screen that HAM-E cannot detect it and will fail to convert your graphic. The only solution I can see is to set your positioning preferences so that these lines appear toward the bottom right of the screen.

Finally, because HAM-E is an RGB device, you can use it with genlocks to overlay HAM-E graphics on top of video. If you plan to do so, however, you will need to tap Black Belt for a special 20-inch shielded cable. While I was able to make some genlocks work ►

without it, Black Belt maintains the cable improves performance. Also, only external genlocks will work with HAM-E, because you plug your genlock directly into it. This rules out devices like Commodore's A2300, Magni's 4003, and Digital Creations' SuperGen 2000S.

Diligence Pays Off

Although Black Belt is enthusiastically supporting HAM-E with free software updates, programming information, and other product improvements, some rough edges remain. For example, although the product has been available for several months, Black Belt has just started providing printed manuals covering the HAM-E's rather complex software.

What's more, while programming information and ARexx support are fine for the more technically inclined user, the beginner may feel a little lost. Still, at its under-$300 price, HAM-E literally has no competition. For those interested in computer graphics who already own a Digi-View digitizer or a genlock, an investment in HAM-E will reap rich rewards.

TurboText

It speaks your language.

By Dave McClellan

TEXT EDITORS STARTED out as little more than glorified card punches; you simply entered chunks of text and God help you if you made a mistake. Nowadays, we expect a lot more—even the public-domain editors, like MicroEmacs or PC-Write, are pretty sound. In fact, editors abound: Compilers come with "free" editors, and even some games provide them. It goes without saying that a commercial programmer's editor needs to be exemplary to find a market.

I am happy to report that ***Oxxi***'s TurboText, ($99.95, or $59.95 to upgrade from TxEd) passes the acid test with flying colors. It is fully Intuitionized (for both Workbench 1.3 and 2.0), uses ARexx for smart macros, and is extremely configurable.

The package comes with configurations emulating BRIEF (MS-DOS editor), CygnusEd (ASDG), MicroEmacs (PD), WordStar (MS-DOS), and other popular editors; versions with menus in French and German; and some syntax-directed editor features for use with C, Assembler, Modula-2, ADA (used by the US Department of Defense), and even COBOL (God help you again). It's fast; you can execute tools such as compilers from it, and even make some improvements of your own.

From Basics to Sublime

TurboText supplies all of the standard functions to help you maneuver through your text via cursor-key and mouse moves over words, lines, pages, whole documents, and strings. It also provides a simple search-and-replace function and allows you to open multiple windows onto multiple open files.

With TurboText, you can cut and paste to and from the Amiga Clipboard (and into ARexx variables) in blocks or smaller quantities. You also get a large number of verbs to use with ARexx macros and in configuring .DFN files (for key mapping), as well as AmigaDOS 2.0-style Preferences setting of colors, string search style, auto-indenting, tab handling, and margins.

Beyond the fundamentals, TurboText implements some special functions particularly useful to programmers and, to a limited extent, to writers. It provides a hex-editing mode for binary files, as well as a programmer's calculator. Turbo Text's "folding" capability, usually seen in outliners, lets you fold a section of text into one display line that remains hidden while you're editing text above and below it. Then, when you are ready to edit that chunk again, TurboText unfolds and redisplays the section. Think of collapsing source-file routines into single lines at routine headers for ease of walking the file, and then unfolding them individually to edit.

TurboText can invoke other programs such as a compiler (or ARexx), and wait for their results. The editor provides you with "Bookmarks" that you can set in a file to mark locations, much like the Unix VI editor's tags. The icons TurboText creates for these markers "remembers" them and associates them with edited files (the .info files). It has a TSR-style component, so you can exit TurboText, run some things in the CLI or Workbench, and

Continued on p. 106.

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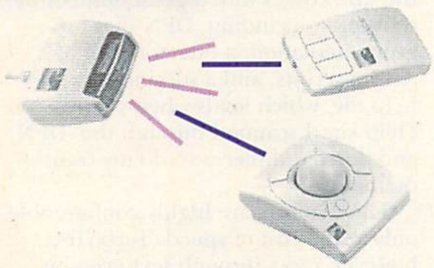
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call it back with a hotkey. In addition, it supports some limited formatting features such as centering and paragraph justification, as well as the aforementioned margins.

To customize TurboText, you can create definition files (ending in .DFN and placed in TurboText:Support), recorded-keystroke macros, and ARexx macros. Definition files are text files specifying the key-to-function mappings, pull-down menus, and requesters. You can map keys to individual commands, to a string of ARexx commands embedded in the .DFN file itself, or to ARexx program macros. You can also record, save, and retrieve learn-style macros (recorded-keystroke macros), and use those in .DFN files via the OpenMacro and PlayMacro commands.

Because I was already familiar with MicroEmacs (MEMACS) and WordStar, I tried these emulations first. I also used the VT100 Keypad emulation (which provides some DEC Editor functionality). All of these emulations worked well. Then I built some features of my own around another full-screen editor I use, working with the MicroEmacs definition as a base. Other than the time I hung up TurboText with a bug in one my ARexx strings (a bad DO loop), I experienced no problems at all.

For example, I added three keys to mark a line as the selected block, or a word, or to unmark the current block. The definition for the Mark-the-current-line was:

```
ALT-L ExecARexxString

"OPTIONS results; GetBlkInfo; PARSE VAR
RESULT BlockOn .;
IF BlockOn=ON THEN
   DO;
   MoveSOL; MarkBlk; MoveEOL;
   END;
ELSE
   SetStatusBar Temporary 'Block Already
      Marked' "
```

ExecARexxString executes its string argument through ARexx. The macro string begins by getting the current selection block info. GetBlkInfo loads the Result variable with the On/Off block selection status and the block's coordinates. If no block is currently selected, the macro moves to the start of the line, sets the block mark, and jumps to the end of the line, thus marking the whole line (the TurboText selection block lies between the mark and the cursor, a normal mouse-oriented model). If there already is a block marked, the macro complains and marks nothing.

The word-marking macro works similarly, except that as it examines the text, the cursor moves over to detect the end of the word. Macros can examine the text at character, line, or word level, set bookmarks to remember positions and then jump anywhere within the text, load new definitions, change Preferences, display pop-up requesters, execute CLI commands, and a great deal more. There are some limitations, but with ARexx, you can make this editor perform all kinds of tricks. I've written smart ARexx macros for the Lattice Screen Editor before, but, by comparison, TurboText provides a lot more flexibility.

The Mandatory Manual

When you're performing this level of customization, a good reference manual is a must, and TurboText's is exceptionally clear. It's thorough, well indexed, and full of examples and pictures (although some of the screen were a little murky). It is spiral bound and sturdy, and so lies flat and stays open when you're poring over it at 2 AM (a much appreciated detail). Also, the disk comes with a great number of examples, including .DFN files for every emulation, a directory full of ARexx scripts, and a succinct, on-line help file, which loads when you hit the Help key. I scanned through the .DFN and borrowed pieces to do my own definitions.

Some editors are highly configurable only at the cost of speed. TurboText, however, races through text even on my venerable A1000, scrolling and searching rapidly. I can open several documents and cut and paste big chunks between them with no problems. File loading, definition-file parsing, and fold processing all occur with better than acceptable performance.

One thing I particularly like about the File Open requester, for example, is that if I click on a selection (such as directory to step into) while TurboText is still loading names into the listbox, it will stop loading the old names and begin again with the listbox from the new directory. This is much faster than waiting for lists of all the names at each

Continued on p. 110.

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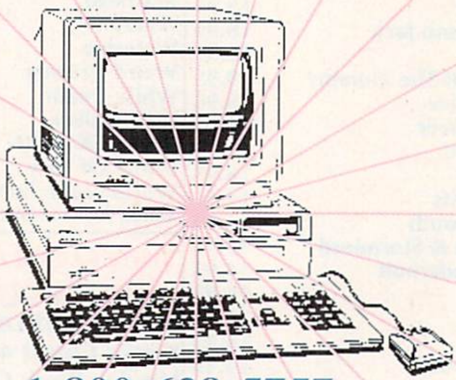
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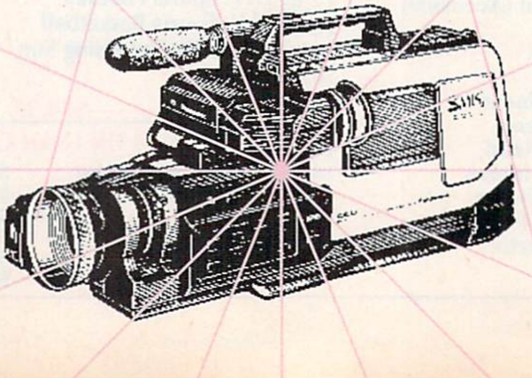
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level. And last, but not least, the pop-up programmer's calculator worked well enough to be actually useful.

All in all, I obviously like this editor. I am going to use it as my standard programming editor from now on. I'm still exploring it after a month's use, and there are even more things it can do that space limitations prevent me from mentioning. What I like best is that it does the basics well—and without hindering progress. What's more, I can add features to it effortlessly. If you want a good programmer's editor, you won't do much better than TurboText.

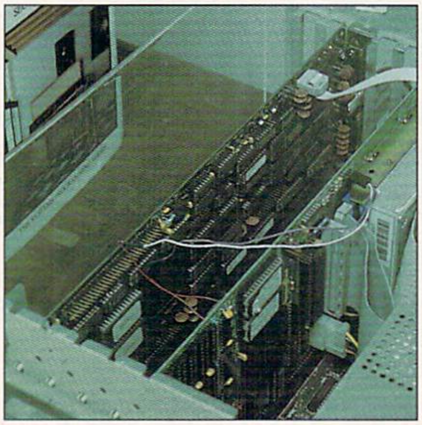
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An idea whose Amiga time has come.

By Brent Malnack

ALTHOUGH MANY AMIGA animators have heard about single-frame controllers, very few actually own one, mainly because of the cost involved. Animators use these devices to render and record their animations one frame at a time. This process not only ensures that your animation moves in real time (30-frames per second) during playback, but also lets you create animations of any length. Without a single-frame controller, you would need to load your animation into RAM and suffer limitations in direct proportion to your system's memory constraints.

Now, ***Diaquest*** has introduced DQ-TACO ($2195), a card that plugs into one of the IBM slots in either an A2000 or A3000. (It does not require a bridgeboard for operation.) Once



DQ-TACO feels right at home in one of your Amiga's IBM slots.

installed, the card controls a wide array of serial-controlled video-tape recorders (VTRs) from the Panasonic AG-7750 or JVC KR-M860U Super-VHS decks to any ¾-inch, 1-inch, Beta, Betacam SP, MII, D1, or D2 machine that can be controlled by means of an RS-422 port.

My experiences with animation controllers in the past have been unpleasant. Often, the documentation was cryptic; or there were long processes involved in preparing some controllers for particular decks, which meant reconfiguring the whole setup. Admittedly, I was not at all looking forward to locking horns with another controller.

Down to Business

When I opened the box encasing the DQ-TACO, I found an encouraging sight: very few jumpers on the board. This is a good indication that the board underwent a thorough design test. The big surprise, however, came when I glanced at the manual. I actually understood it. After reading a few pages, I finally learned how animation controllers work, even though I've been using them for a couple of years. DQ-TACO's primary function is for use with NewTek's Video Toaster, and the manual was quick to cover installation in a Toaster system.

After a few moments, I had the board installed, needing only to connect the system cables. You will need to synchronize DQ-TACO with the Toaster and any other components in your video system. I split the house sync signal that was sent to the Channel 1 input of my Toaster and connected it to the reference sync input of the TACO. The final connection is from one of the TACO's two remote ports to your VTR. The manual includes pages of diagrams describing configuration to just about any video system.

Because the documentation is so well written, DQ-TACO is appropriate for a novice. After about 15 minutes of preparing the controller through the Toaster according to the directions, I was laying my first animation to tape. It worked perfectly the first time.

Only three commands are necessary to operate the TACO from LightWave ►

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3D (software bundled with the Toaster). You input these commands in LightWave's Record Control Panel: INIT initializes the TACO; SetIn sets the inpoint in SMPTE time-code format to begin recording on the tape; and, finally, Edit 1fp records one frame at a time. To record two of each frame, you would use Edit 2fp.

DQ-TACO offers nearly 60 commands. It was possible to control the deck in nearly any manner directly from my Amiga. The commands are straightforward and easily understood. For example, Play puts the deck into play, and Still pauses the deck.

When I noticed that the board provided two remote ports, I wondered if the TACO would make it possible to control two decks simultaneously and perform cuts-only editing. A quick call to Diaquest confirmed that not only is this possible, but also that the company is currently developing software specifically for this purpose. The ability to edit scenes and animate with the same device would be a valuable added benefit, and would make the TACO's price even more attractive. Other modifications in the works include the ability to use the TACO to control a digitizer and thereby grab frames from a source deck for use as a texture map or background image.

Using ATalk III from Oxxi, I was able to assign various commands to the Amiga keyboard function keys, so that, with the TACO installed, I could use the Amiga as an extra editor.

Easy Switching

A major advantage of this controller is the ability to switch effortlessly between two VTRs. This is possible because DQ-TACO can determine to which deck it is connected if you enter the command "INIT." Having access to many VTRs, I connected the unit to a serial patch bay and can now access any VTR in our post-production house.

The TACO should work with any Amiga animation software that either supports single-frame controllers directly or that work with MicroIllusion's Transport Controller software. You also should be able to control the TACO from ARexx and a terminal program.

Even the technical support from Diaquest is superb. The few questions I had were quickly and professionally answered by a knowledgeable staff.

The TACO should help define the Amiga's niche as *the* desktop video machine by adding another powerful function to the Amiga's growing list of achievements. With DQ-TACO, a Video Toaster, a TBC, and an Amiga, you can have a sophisticated video studio on your desktop.

I highly recommend DQ-TACO. Not only is it the easiest animation controller on the market, but the added ability to control two VTRs at once gives it power that is unsurpassed.

SupraModem 9600

Baudy adventures.

By Geoffrey Williams

IT USED TO be a lot easier. If you had little money, you settled for a 1200-baud modem; otherwise, you moved up to 2400 baud. Now there's 9600 baud, MNP 1-5, V.32, V.42bis and other confusing standards. While SupraModem 9600 ($699.95), a new 9600-baud modem from ***Supra Corporation***, supports all of these standards at a reasonable price, you have good reason to learn what all of this means.

It started with US Robotics' introduction of its HST 9600-baud modem. Hoping to corner the market, the company offered BBS owners special deals and made its 9600-baud transmission methods proprietary so that HST modems could talk only to other HSTs. The scheme worked, and other modem manufacturers found it difficult to enter the market because the proprietary HST was so entrenched.

The CCITT (the international committee that sets telecommunications standards) came to the rescue by creating the V.32 specification standard for 9600-baud communication. This made it possible for other manufacturers to enter the market using the V.32 standard.

The SupraModem supports the V.32 specification, but obviously not the proprietary HST format. This means that you cannot use the SupraModem to call a 9600-baud HST board (of which there are many), unless it is dual-standard (meaning it supports both V.32 *and* HST). As of April, prices had fallen dramatically on the US Robotics HST dual-standard modems due to the competition, so the number of BBSs supporting both formats should increase.

Choosing between a dual-standard HST and a V.32 modem can be difficult for those with lots of money, but for the rest of us, the choice is a little easier—the cost of a V.32 modem such as the SupraModem is significantly lower. While the US Robotics modems are superior in some ways (and costing almost twice as much, they should be), the open standard and lower costs of V.32 modems dramatically decrease the significance of HST.

Soon, many more BBSs will probably support the V.32 standard. Further, V.32 is full-duplex, unlike the HST's variation of half-duplex. As the bi-modem format (not supported on HSTs) becomes more popular, it will be possible to upload and download simultaneously at 9600 baud. For the near future, it would be silly to buy an HST modem that was not dual-standard, and in a year or so, V.32 will completely eclipse HST.

Compression Protocols

The SupraModem 9600 also supports MNP 1 through 5. The 1 through 4 protocols handle error correction, while MNP 5 compresses data. If you are calling another modem that supports MNP 5, it is theoretically possible to get 19,200 bits per second (bps). This does not work out so well in practice, though, as most BBSs turn off MNP 5. Why? Because with already compressed files, such as ZIP and LHARC files, you will wind up actually slowing down the transmission rather than speeding it up.

A compression protocol superior to MNP 5 is V.42bis. Some modems may claim to be V.42-compatible, but this is not the same thing as being V.42-compliant, as is the SupraModem 9600. Because the SupraModem fully supports the V.42bis protocol, you can get up to 38,400 bps throughput (4:1 compression). Thanks to a special chip, the V.42bis protocol is much smarter than MNP-5. It determines whether or not it can compress a file further, and it won't slow things down as MNP 5 can.

Supra has been a reliable manufacturer of modems for quite a while, and has long offered very good prices for a quality product. If you decide you want to move up to 9600 baud (and if you do, you will never want to go back to slower speeds), you can't go wrong with the SupraModem 9600. It supports all the current standards, is attractively designed, and comes with a cable, indicator lights for nine functions, and a five-year warranty. Now, if only all BBSs supported V.32, I'd be in on-line heaven. ■

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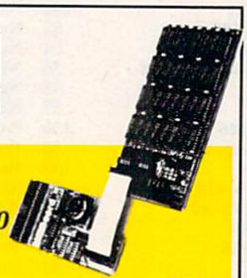
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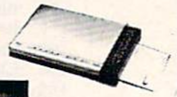
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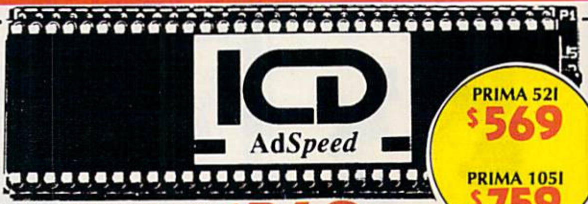
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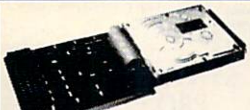
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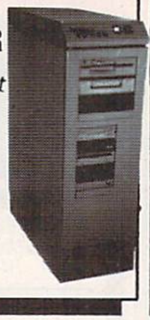
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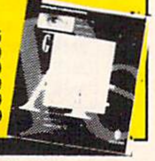
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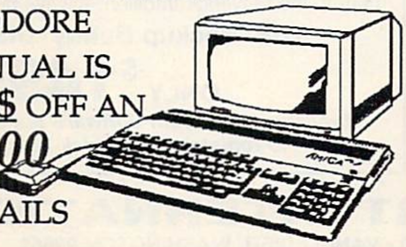
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We have been the official Public Domain Library of all of the best Amiga magazines. Find out why these magazines choose us! Each of our disks are jam packed with only the best programs. The first two letters on each disk indicate the orientation of the disk; DD# intermediate to advanced - often contains source, WB# general interest - most programs can be run from the workbench, and FD# games and entertainment. Order our disk based catalog and receive a coupon for a **complimentary** volume with your next purchase.

Featured Disk

FD39a & b: Star Trek, The New Generation - This is a, completely different version of Star Trek than that found on FD12. This one was created by the German author Tobias. Now with English instructions. Very Excellent!!! Counts as two disks.

New Disks

FD69: MindGames - Had enough of shoot-em up blasting games? Relax and let these 21 games exercise your mind instead of your wrist.
FD68: Potpourri - Eternal Rome is a strategic simulation of the Roman Empire including military, diplomatic, political, economic and social factors. Lord of Hosts is a board strategy game for 2 players. In Moonshine, you've got to get the hootch across the state line--a great rolling, scrolling driving game!
FD67: Arcade - Includes Llamatron a well-done 'Robotron' clone. Hate is a "terrific" commercial grade Zaxxon clone with multiple levels/worlds and smooth diagonal scrolling...a 10!
FD66: GameTease2 - Contains playable demos of ChuckRock and Torvak
FD65: GameTease1 - Contains playable demos of Atomino and Turrican II
FD64: Games - Wizzy's Quest - a "great" 50 level game with great graphics, Cubus - a 3-dimensional Tetris type game (rotate and move in 3 dimensions). Husker Du - Colors and pattern rather than shape in this Tetris-esque game; 5 screens and 3 levels of difficulty. Requires Fat Agnus (1 Meg of Chip)
FD63: Quizzsho!; an interactive multimedia quiz game show program that tests your knowledge of DpaintIII. The questions can be changed so you may quiz on whatever topic you'd like.
FD62: PomPom Gunner. An extremely smooth and well done World War II gunner simulation. Requires 1 meg chip memory.
FD61: Games Solitaire; great graphics, plays two versions. Klide; an interesting piece of eye candy. Extreme Violence; 2 player kill or bekilled game. YATC; A Tetris clone with Artifical Intelligence. Genesis; create realistic 3d fractal worlds.
FD60: Games In Nebula, race over a 3d world to destroy enemy installations. Interferon; a great Dr. Mario clone. Enigma; is it a gameor a puzzle?
WB100: CaligariPRODemo - Can't afford $3,000+ to see if the granddaddy of 3D rendering software is for you? Then try the demo version of this renowned modeler that the pro's rely on! No built-in save function, requires 68020+ processor.
WB99: Lifestyles - Includes AGene--family tree program that tracks up to 600 people/marriages/etc, Landscape is a backyard CAD program to create gardens/landscapes, Loom simulates an 8 harness loom; experiment with pattern design in an instant feedback environment.
WB98: Business - Includes BBaseII a nice, powerful database; BizCalc--a personal or mortgage loan calculator with amortization capabilities, Loop--a flowchart maker, Formmaker - design professional looking forms on your Epson LQ-2500 compatible printer.
WB97: Molecule3D - An Interactive 3d solid modeling program for molecules; creates stunning 3D pictures of molecules. Disk also includes a mailing list manager.
WB96: Dupers - Contains XcopyIII & Nib which will backup copy-protected programs. FreeCopy removes copy protection from several programs, and SuperDuper will crank-out fast AmigaDOS copies.
WB95: Checkbook Accountant 2.0 This program is definitely commercial grade; we've seen many checkbook programs and this is absolutely the best. Full budgeting, transaction recording and report generation.
WB93: Workbench Extras #2 This disk contains the utilities that Commodore should have shipped with the Amiga; VirusX4.0, Snap, FixDisk (recover corrupt/deleted files), Disk Optimizer (floppy & hard), MachIII (screen blanker, hotkey, mouse accel., macro, clock utility), GOMF (a gurubuster)and PrintStudio.
DD81: Arexx Tutorial - Includes several sample Arexx scripts and sample programs. Also includes APig; a library that gives you access to Intuition from within Arexx scripts.
DD80: VFont System - A font rendering system that extends the Amiga so that it will be able to use vectorized outline fonts. Fast rendering, rotating, and sizing. Use in your own programs!

Other Great Disks

FD5: Tactical Games - BullRun - a Civil war battle game, Metro you play the role of a city planner. Build wisely and your system will be a success, but poor planning will lead to disaster and financial ruin. Very very habit forming.
FD6: GAMES! - This disk is chock full of games including; Checkers, Clue, Gold - A new slide the pieces puzzle, Jeopard - An enhanced version of Risk, RushHour - Surprisingly addicting, and SpaceWar - Best described as a cross between Combat-Tanks and asteroids.
FD7: PACMAN - This disk contains several pacman type games including; PacMan87, MazMan and Zonix.
FD9: Moria -. This has great graphic controls, multiple spells, similar to Larn and Hack. Play time several weeks!
FD10: HackLite - A dungeon adventure game. Considered a must-have classic. This is the second release of this game on the Amiga. Great graphic interface. Play time several weeks!
FD11: Las Vegas and Card Games - Las Vegas Craps - The best Las Vegas Craps simulation every written for any computer. Contains extensive HELP features, Also Thirty-One,VideoPoker and more.
FD12A,FD12B: Star Trek, The Game - This is by far the best Star Trek game ever written for any computer. It features mouse control, good graphics, digitized sound effects and great gameplay. Counts as 2 disks. Req. 1Mb and two drives (or hd).
FD13: Board Games - contains multiplayer Monopoly, Dominoes, Paranoids, and others.
FD14: Dungeon Master Hints and Arcade Games - DM maps, spells, item location, and hints and more, also on this disk, Hball - an arkanoid/breakout type game, Trix - a Qix type clone.
FD17: Educational Games - This disk includes several games for the younger members including geography, math, science, and word games, also includes Wheel of Fortune.
FD20: Tactical Games - MechForce(3.72); A game that simulates combat between two or more giant, robot-like machines. Simple words can't begin to give you the feel of piloting a 30 - 40 foot tall, fire breathing, earth shaking colossus that obeys your every whim.
FD26:Arcade Games - Marble_slide, this is a truly commercial quality game. Similar to a Lucas game named PipeDreams, excellent playability and entertainment, Mutants , a small version of the arcade game of the same name, also SuperBreakout a pong/arkanoids type game.
FD27: Arcade Games - This disk is loaded with some great games. Includes, Raceorama a great racing car game with ten different courses, MiniBlast a helicopter gunship type clone, Shark in the same class as froger, and SBreakout the original breakout with more.
FD29: Shoot'em up's - WWII - you're the pilot of a WWII plane flying through enemy territory, you've just been spotted, good luck on you mission, SpKiller - try and penetrate enemy lines with this game, and Retaliator - another great game.
FD31: Games! - Air Traffic Control - a good ATC simulation game, Black Jack Lab - a full featured set of card games, ChessTel - play chess with your friend in distant and remote places with this game and a modem, labyrnth - a well done text adventure game (like an infocom game), and MouseTrap - a 3d maze game.
FD32:Flight Simulator - Includes an instrument flight simulator for a DC10.
FD33: Arcade Games - Ffreddy a mario brothers type of game, Gerbils a target practice game, PipeLine a German interpretation of Pipe Dreams, Tron a light cycles version, and wetroids a wonderful version of asteroids with a hilarious twist.
FD35 Omega (v 1.3) - A new outstanding dungeon and outdoors adventure game in a similar vein as hack, rouge, and moria. This version is considerably faster and better that all previous versions. Play time several weeks or months.
FD37a & b:Tactical Games - Empire (2.2w) This great game comes highly recommended. With a full-graphic front end.
FD38:Games - Cribbage Master - A great cribbage game and tutor, Spades - a well done card came, ChineseCheckers - A computer version of this classic, Puzz - a slide piece puzzle game and construction set.
FD44: Game - Mechfight is an out of this world role-playing adventure comparable to hack and moria. The setting, interplanetary colonies and space stations. In your quest to explore the world, take time out to liberate bad guys of their most valuable possessions, engage in a mortal combat or two against robots and alien life forms, pick up a new amiga 9000. Most of all, don't forget to stay alive...
FD49:Chaos Cheats - This disk contains an everything you wanted to know about cheat set for Chaos Strikes Back, including full maps, spells, object locations, super characters and more.
FD50: Submarine Game - Sealance, one and a half years in the making, this is an outstanding submarine tactical game. Commercial quality, highly recommended.
FD52: Classics Games - PetersQuest a well done Mario brothers type of game, Jymbc a two player missile command clone, and Vstank a tank commander game.
FD53: Great Arcade - On this disk is a wonderful implementation of the ever popular classic arcade game Defender. Also contain Air Race a WWII flying ace arcade game, and Psycoblast new creation idea game.
FD56: Arcade - Includes SpaceWar, HueyRaid a well done helicopter arcade game, and PowerPong a great expanded pong game.
FD57: Arcade Games Includes 2 true commercial quality games. MegaBall is the successor to Ball; features 5 full musical scores, multiple levels and addicting gameplay. Gravity Attack is a psychadellic trip through several different worlds--each distinctly different.
FD58: GAMES! Includes Steinschlag; a great Tetris clone from Germany with music. SCombat: simulate battle between up to 40 players & monsters. Imperium Romanum: Battle up to 4 players for control of the Mediterranean in this Risk-esque game.
FD59: Game Potpourri Xenon III is an almost exact clone of the commercial game of the same name...a great shootemup. Crossword will take lists of words & automatically generate crossword puzzles for any Epson compatable printer.
WB4:Telecommumnication - This disk contains several excellent pd communication programs designed to get you on line quickly and easily, Access (1.42) - A very nice ANSI term program based on Comm v1.34, but with the addition of transfer protocols, Comm (1.34) - Last version of one of the best public domain communications programs ever made on the Amiga, Handshake (2.12a) Handshake is a Full featured VT52/100/102/220
WB5 - Fonts #1- Several fonts (35) for the Amiga, also included are five PageStream fonts,and ShowFont - a font display program.
WB6: Video Fonts #2 - ShowFont(4.0) This program allows you to quickly and painlessly view all 256 characters in a typical font. Large AmigaDos system fonts (many up to 56pts).
WB7: Clip Art - This disk is loaded with black and white clip art. Art includes, trees, watches, tools, US and State maps, and more.
WB9:Icons - Truly a multitude of various types and kinds. Also includes IconMiester, IconLab, and others great utilities to help generate icons.
WB10:Virus Killers - The latest and best VirusX(4.0), Kv(2.1), and ZeroVirus(1.3).
WB11: Business - Clerk(4.0), finally a full featured business accounting PD program for the small to medium company. Includes receivables, payables, end of month and uch more.
WB12: Disk Utilities - This great disk is loaded with wonderful utilities for everything including making disk labels, disk cataloging, disk optimizing, disk and file recovery archive and organizing, and all sorts of file manipulation. A must have!
WB13: Printer Drivers and Generator - over 70 different drivers, and if these don't do it, with PrtDrvGen you can make your own.
WB14: Video- on this disk are several utilities for the video enthusiast. We have included multiple slates, video titling, Bars and Tone, Gray Scale, Screen fades and swipes, Interlace toggles, and SMPTE Calculators .Also on this disk is a full featured video cataloging program.
WB15: Business - This disk contains a spreadsheet, a database, a project/time management program and financial analysis (stocks).
WB16: Business - This disk contains an inventory manager, a loan analysis program, a great calendar/scheduler, a rolodex program, and pennywise a good "Cash Book" accounting for home or office.
WB18: Word/Text Processors - This disk contains the best editors. Includes,TextPlus (v2.2e) a full featured word processor, Dme(v1.35) a great programmers editor with strong macro features,TexED(v2.8) an enhanced Emacs type editor, and a spell checker.
WB20: General Interest - DiskSalv V1.42 a disk recovery program for all Amiga file systems, FixDisk V1.0 another file recovery program with features DiskSalv doesn't have, 3DLookt gives a 3D appearance to your WorkBench, Clean V1.01 a program to de-fragment memory, Tracer - trace any part of an image.
WB22: Fonts #3 - Several more great fonts. These, like the other font disks work great with Dpaint and WYSIWYG word processors.
WB23: Graphics and Plotting - Plot (20b) a three dimensional mathematical function plotter. Can plot any user defined function, BezSurf2 - produce awesome pictures of objects one could turn on a lathe. Can also map iff image files onto any surface that it can draw. Now compatible with most 3D packages, and VScreen - makes a virtual screen anywhere, great for DTP .
WB25:Educational - On this disk are two programs that can generate maps of differing types, World Data Base uses the CIA's data base to generate detailed maps of any entered user global coordinates. Also Paradox a great demonstration of Albert Einstein General Theory of Relativity.
WB26: Disk Utilities #2 - MrBackup, KwickBackup - two well done utilities to help with harddisk and floppy disk backups, FileMast - a binary file editor, Labelprinter - Disk label printer with very powerful features.
WB27: Nagel - 26 Patrick Nagel pictures of beautiful women.
WB29: Graphics and Sound - This disk has several different Mandelbrot type programs for generating stunning graphics. Includes, MandelMountains - a realistic terrain generator, Fracgen - generated recursive fractals from user input, Mandelbrot and Tmandel - two fast mandelbrot generators, also Mostra - the best IFF display program to date, will display ALL IFF's including Dynamic HAM, and Sound - a great IFF sound player, will play anything. Try this disk!
WB33:Circuit Board Design - several terrific routines for the electronic enthusiast, Including PCBtool - a circuit board design tool, LogicLab - circuit logic tester, and Mcad (1.26) a well done new release of this PD CAD program, now comes with predrawn common circuit components for insertion into schematics.

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WB34: Utilities - Several well done utilities, some will require moderate knowledge of a CLI or Shell for setup, Chatter Box - this one will play any user defined sound after any event (ie. disk insert, mouse click, disk removal...), , Artm - The Amiga real time monitor, gives you full control of the Amiga OS, very powerful program, Helper - help program to make learning the CLI easier, and more!
WB35: 3d Graphics - This disk contains several neat programs to use with your 3d modeling/raytracing programs 3dFonts - Full vector font set for use with 3d programs, FontMaker - make 3d fonts from any system font, Make3DShape - create 3d shapes from any image, DumptoIFF - create 3d animations preserves pallet, and World3d - a demo program of a front end for use with DKBRender.
WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrically similar to a rose, SimGen - display those spectacular images as part of your workbenck screen, and RayShade - a very good raytracing program, create your own beautiful 3d graphic models with this one!
WB35: 3d Graphics Cont.- World3d - a demo program of a front end for use with DKBRender.
WB36: Graphics - On this disk are several programs to create stunning graphical images including, MPath - creates swirling galaxy images, Roses - produce an unlimited number of variations of images that a symmetrically similar to a rose, SimGen - display those spectacular images as part of your workbenck screen, and RayShade - a very good raytracing program, create your own beautiful 3d graphic models with this one! **Wb37: Educational** - Educational games and puzzles that cover math, geography, spelling, and books. Ages 6 - 15
WB38: Plotting and Graphics - Plotxy is the most powerful full featured plotting package. Used by many colleges and universities. A welcome addition to our library! Highly recommended. Plans - a incredibly well done Computer Aided Drafting program, very full featured. Tesselator - a program that helps generates fantastic looking, recursive M.C. Ecsher type pictures.
WB39: Music - Intuitracker is a German offering of an exquisitely well done program that allows you to play music on your Amiga with CD like controls. Lets you strip out music from your favorite games or others and include them in your music library.

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WB40: Music - "CD on a disk", 90 minutes of modern music on this well presented collection.
WB41: Music - MED an incredibly well done, full featured music editor. Create your own stunning music directly on your the Amiga. Similar to SoundTracker but better. Very powerful easy to use program.
WB43:Business - This disk contains AnalytiCalc - probably the most powerful spreadsheet program on the Amiga. A full featured spreadsheet with many features expected in a commercial package. Requires 1.2 MB of memory!
WB46:Clip Art - HighRes clip art with the following motifs - embellishments (borders, dodads ,...), people, and transportation.
WB48: Clip Art - HighRes clip art with the following motifs - Holidays, music, medical, and misc.
WB49abc:Animation Sampler - On this three disk sampler set (counts as two disks) are some of the best animations that have been created over the last three years. Several examples of "Movie" type animations some with spectacular raytraced reality (coolroby, watch, spigot and egg). Also several european style or "Demo" animation with incredible graphics and outstanding electronic music (akrilight, copersine, doc, dps2010, impact, and logodemo). These truly show off the creative edge of an Amiga!
WB50: Animation - Seven of the best european style animations or "Demos", including - scientific 451, subway (a U.S. entrant, also our favorite), sunride, thrstdemo, tnight, waves, and woow.
WB53:Graphics - Raytracing programs generate absolutely stunning realistic looking planes, rockets, buildings..., and surreal images often consisting of highly polished spheres and objects. C-Light is the most powerful EASY-TO-USE of it's kind we have seen to date. This is easily better, and more full featured, than similar commercial programs costing in the hundreds of dollars. Also, sMovie - a full featured video text titler similar to ProVideo, Broadcast Titler. Great video scrolling, wipes, special effects, and more...
WB54:Printing - This disk contains several routines to help with the chore of printing. Includes Gothic - Finally a Banner printer for the PD! PrintStudio -a well implemented all-purpose printer-utility with a very comfortable graphic interface and many advanced features, Lila - with ease, print ASCII files to a PostScript printer, and many more.
WB55:Application - XCopyIII - a full featured disk copier, make backups of write protected disks. RoadRoute - find the quickest route from one city to another, highway description included, Diary - a diary program like "Dougy Howard M.D", Cal - a calendar program, Magman - a database tailored to maintain records on articles and publications.
WB57:Animation - This disk has several "Demo" style animations, Including, Blitter, Lolly, Sun5, vertigo, vortex, and xenmorph.
WB59:Business - contains a great, very full featured stock market technical analysis and tracking program, also an appointment calendar, and more.
WB61:Intermediate Utilities - Includes programs to help to drasticaly decrease flicker in interlace and hi-res modes (antiflick), an Atari-st emulator, an eprom programmer, turn your amiga into an eight channel digital data analyzer or ocilloscope, and more.
WB62:Midi Utilities - Several useful midi utilities including, programs to transfer to and from several music programs to midi, a midi sysex handler, a midi recorder with timebase, display midi info, file sequence player, and a few scores.
WB63:Disk Utilities #3 - Several highly recommended programs to aid in removing duplicate files from your hard drive, performing file backups, Binary editing, fast formatting, file recovery, disk track recovery, and forced DISK VALIDATION of corrupt disks.
WB66:Icons #2- Lot's of neat icons. Also, several wonderful programs that to let you create your own icons, modify and manipulate icons and info structures.
WB68:Music Utilities - several good utilities for the Amiga music enthusiast. Includes, Noisetracker - a great music creation program, Sonix2MOD - converts sonix to .mod files which then can be used by noisetracker, soundtraker, and MED, SpeakerSim - a speaker design tool demo, Wondersound is an additive harmonic instrument design tool with a separate envelope design window and 16 relative harmonic strength and phase angle controls.
WB69: Music - This disk has over 90 minutes of classical and modern electronic music for you Amiga.
WB70:Desk Top Pub - Atcp - transfer Macintosh screen fonts, Mac or IBM format .AFM metric files, to Amiga screen fonts and PPage .metric files. With this program open door to the libraries of Adobe and PostScript type!, Calendar - month templates in PS form, Post - a full featured post script file display and print utility.
WB71:C64 Emulation - The A64 Package is a complete, very powerful, Commodore 64 emulator.
WB75: Music - over 100 instruments files (.inst) and sample sound files (.ss) for your music programs.
WB76: Applications - This disk contains Stichery - a often requested knitting design program, Lotto - a rather complete lottery tracking and prediction utility, SSS - this screen capture program can grab almost any screen including games, Today - a personal calender, Tarot - fortune teller, and Grammar - grammar checker.
WB78: AV - On this disk are two Amiga Vision programs (bubbler, sync) written by Lou Wallace, chief technical editor of Amiga World. These programs are marvelous examples of how too's with AV.
WB79: Home & Business Accounting - Includes Ckbacct - the most complete checkbook accounting program going, LCDCalc - this well done calculator has a very large display and operates from the keyboard or mouse, Mileage master - monitor your automobile mileage with this mileage log, Grammar - a grammar checker, and Worldtime - find out what time it is in up to 50 global cities.
WB81: Great Applications - DataEasy a very easy to use, database program. Don't let the ease of use fool you, this is a very full featured database program including full printer control for address labels and mail merge applications. Also includes, TypeTut a good typing tutor, RLC a full featured label printer, Banner, a multi-font banner maker, and Budget a home accounting in a program. Highly recommended.
WB82:Animations - Four full length, well done "movie" style animations. Including, Coyote, JugglerII, GhostPool, and Mechanix. Two disk set, counts as one!
WB83: Computer Art - this disk has some of the best Amiga generated computer art that we have collected in the past 5 years.
WB85: Graphics - Contains several programs for manipulating 24 Bit color images (ham-e) and a rather nice Iff Image processing package.
WB86: Amiga Vision - Contains the Centurion Press, An Amiga newspaper by Lou Wallace.
WB88abc: The Complete Bible - A three disk set, with the entire text of the New Testament and Old Testament. Great search utilities.
WB90: Rippers, Strippers and Beats - For the Amiga music enthusiast, this disk contains many programs designed strip music from your favorite games and programs. Music can then be played with your favorite Pd Music program. Also contains Drums, a very nice drum machine. This disk can require moderate knowledge of the CLI.
DD45: AREXX PROGRAMS - This disk contains several useful arexx programs and examples, PopCLI4 - The latest of a must have utility.
DD47: Pascal - This disk contains everything needed to program in Pascal. Includes, A68k (1.2) 68000 assembler, Blink linking software and PCQ (1.0) a modest Pascal sub-set compiler.

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DD49: C Compiler - contains zc(1.01) fully K&R, zcc(1.0) front end, A68k(1.2) assembler, Blink linker.
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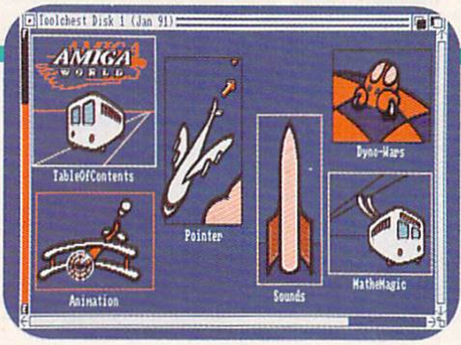
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The Last Word

Kudos, complaints, comments, concerns, and contributions from our readers.

Call for Action

After some very prejudicial and negative statements about the Amiga, Jeff Holtzman, computer columnist for *Radio-Electronics* magazine, has recently made a courageous change in his stand. In his August column, he describes the origins of his prejudice and asks the Amiga community to help enlighten him and *R-E* readers.

Radio-Electronics is a prominent magazine in its field, reaching a technically minded readership that is open to new and better technologies. I think the Amiga would be well received by these people if they could get accurate information about it.

Holtzman has called on the Amiga community to write articles and submit information on new products for *R-E* to print, so this is a golden opportunity for Amiga users and manufacturers to reach a large group of technical people who have just recently been exposed to the "joys" of windows for the PC. The Amiga should blow them away.

Come on, Amigans, lets show *R-E* and its readers just how powerful the Amiga is. We have a new forum for telling our side of the story, so let's use it! The address: *Radio-Electronics*, 500-B Bi-County Blvd., Farmingdale, NY 11735.

Jonathan Norris
Triffid Research Group
La Grande, Oregon

To Use It Is To Love It

I recently inherited two and a half Amigas, the half being the bare chassis of an A1000 that will work once it has all its parts. I have spent the better part of a week playing with the two functioning machines, and I'm duly impressed. I have worked with the Apple IIs, MS-DOS machines, and Macintoshes, and none of them really can compare with the A1000. Sure, a fully tricked-out Mac or IBM clone can do graphics and sound, but who has the money for one? I sure don't!

I had seen Commodore's Amiga ad campaign some years ago, but the pretentiousness of the copy turned me off. I never realized how capable the Amiga was until I sat down and took one for a test drive. Maybe Commodore ought to lend one to every Mac or MS-DOS user for a week. I bet they would then sell a lot more Amigas!

John Wheaton
Louisville, Kentucky

Prod the Developers!

I appreciate the recent information that WordPerfect is considering a release of an updated version of their program for the Amiga. I have written them to support and encourage this.

We have a new forum for telling our side of the story, so let's use it!

I hope that *AmigaWorld* continues to give Amiga owners tips on where to write to encourage the big boys to get off their duffs and write more programs for the Amiga.

John Stelmach
Philadelphia, Pennsylvania

Non-Support Woes

The reason I bought DCTV was so I could do NTSC animation with Imagine, but then I found that DCTV and Imagine 1.1 don't work with each other! I talked with people at Impulse who said that if Digital Creations would give them the necessary information, they could support DCTV. Digital Creations agreed to send the information to Impulse, and I thought all my troubles were over. But now Impulse tells me there are so many new features on Imagine 1.2 that DCTV support is unlikely. Now, I'm mad! I'm sending this letter to Amiga magazines in an attempt to get Imagine/DCTV users to lean on Impulse. We want DCTV support!

Marc Hoffman

Where Were You, CBM?

This week, I had the opportunity to attend the SIGGRAPH convention in Las Vegas. The experience was mind-blowing, frustrating, and exciting, but most of all it was eye-opening. As an Amiga user, I was appalled that Commodore's presence was token at best. Its lack of interest in participating in such events sends a clear message, not only to the public, but to its own graphics users. It seems to me this implies that the Amiga has succeeded in spite of Commodore, not because of it, and it is the third-party developers who have borne the burden of marketing the Amiga as an inexpensive graphics work station.

John Bavaresco
Long Beach, California

Don't Throw Stones!

A note to fellow Amiga users: I hope that there are very few of you who turn up your noses at other computers, for being prejudiced against other machines only makes it look bad for the Amiga and its users. If you want to promote the Amiga, don't bash other computers; instead, try letting the Amiga sell itself by taking every opportunity to show off its numerous capabilities. I've helped sell several Amigas just by letting my friends see what my A500 can do.

Mark Worden
Saint John, New Brunswick

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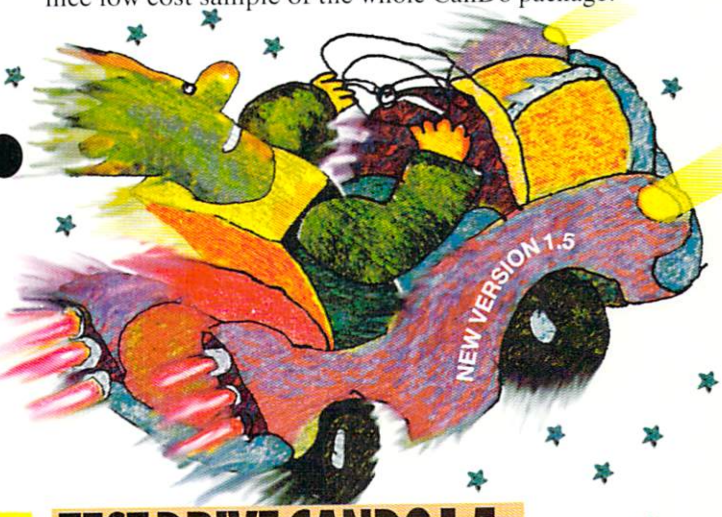
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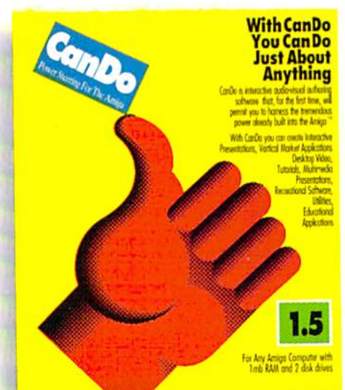
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